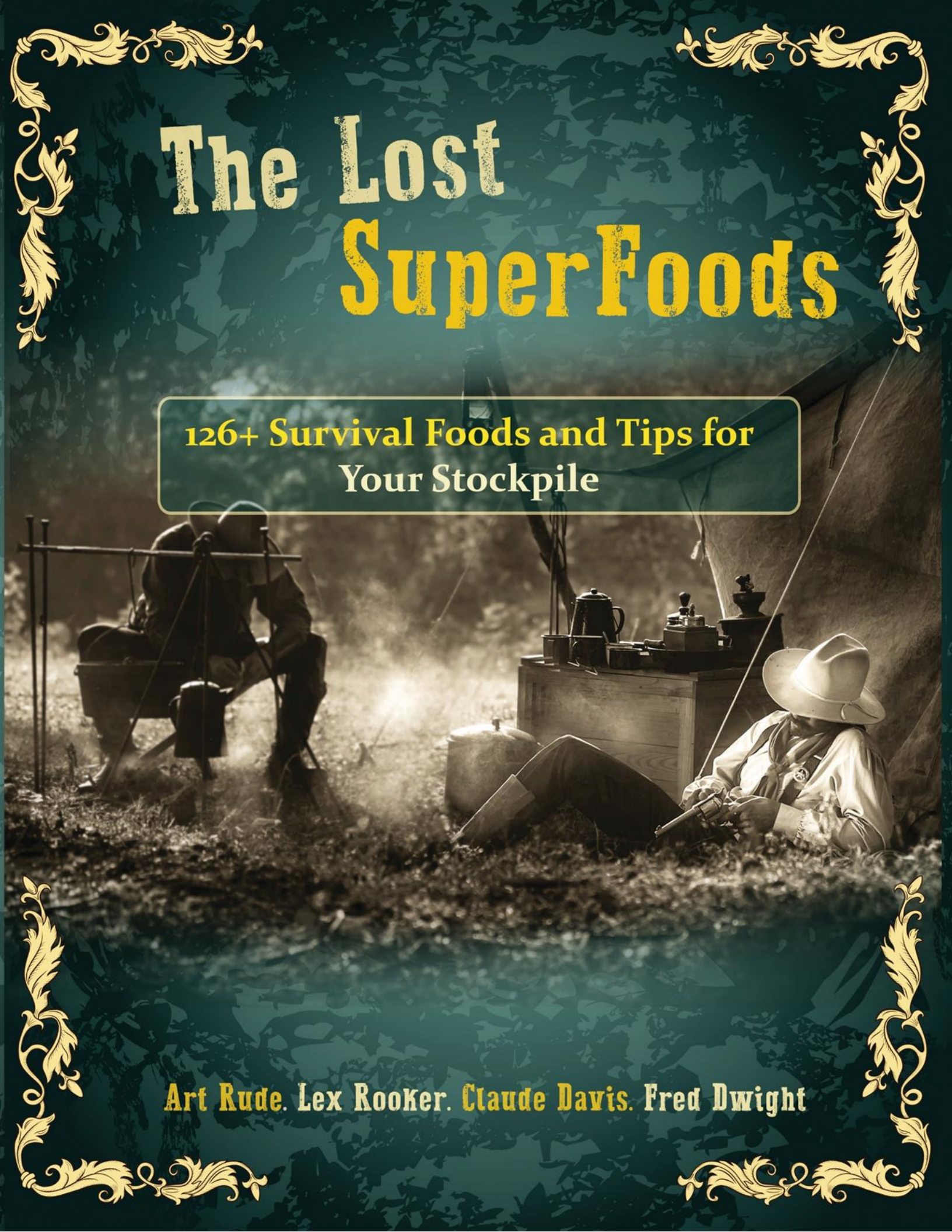
The Lost SuperFoods

126+ Survival Foods and Tips for Your Stockpile



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The Lost Super Foods

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Doomsday Ration Recipe

During the Cold War era the United States government spent a massive amount of time and money attempting to develop a high-calorie survival cracker.

A multitude of trial and error tests went into the creation of the hardtack crackers designed to feed the masses after a nuclear attack.

During the early 1950s, hundreds of thousands of Americans volunteered to man the rooftops of buildings, fire towers, and even church steeples 24/7 to keep a keen eye out for Russian bombers rushing through the sky.

The presumption at the time, which of course defies what preppers now believe, was that the bulk of the population of the United States could survive a nuclear attack.

Fallout shelters were big business back then. Everyday, Americans were scraping together every last dime they had to build a fallout shelter in their backyards, or turning their basements into a World War III bug-in location.

The threat of a nuclear attack during the Cold War era impacted the everyday life of all Americans. Schoolchildren were taught to "duck and cover" under their desks to better protect themselves if World War III began while they were in class.

In New York City, more than two million dog tags were distributed to students to help identify dead bodies after an attack and to help reunite little survivors with their parents.

Morbid but practical reasoning prevailed in at least one of Indiana's counties' attempts to deal with the aftermath of a nuclear attack.

Instead of issuing military style dog tags to students, the children had their blood types tattooed on their armpits.

Why tattoo their armpits and not rather their wrists or forearms, you might be wondering? Because an arm can easily be blown off during an attack - prompting the need for a quick infusion of blood to save a victim's life.

The United States government shifted into overdrive, trying to develop, manufacture, and then distribute a shelf-stable, protein-rich, and high-calorie food source that could feed all of the survivors that would seek refuge in fallout shelters, as well as those that would eventually emerge from their bug in locations.

All around the country, fallout shelters for the masses were being developed and labelled by the FBI with tell-tale yellow and black signs - the faded presence of some still remain on public buildings to this day.

The Boy Scouts were tasked with mapping out underground caves, abandoned mines, and in the case of Hawaii, lava tube caves, so that these too could be used to shield Americans from a nuclear blast. Civil Defense teams on a local, state, and national level were attempting to cram as many folks into 10 square-feet of living space as humanely as possible.

As the Army Corps of Engineers worked to make 450 caves across America habitable, government officials started to focus on both how safe and how liveable the makeshift underground shelters would be for the survivors who would stay huddled inside.

In California, prison inmates were offered an entire day off of their sentences for each day they participated in underground shelter testing.

The results of the underground fallout shelter testing ultimately created the national standards for such emergency dwellings. The next stage of ramped up government Cold War planning focused keenly on how to feed the estimated 50 million very hungry people expected to survive a nuclear war initiated by the Soviet Union.

In 1955 The Federal Civil Defense Administration, under the guidance of President Dwight D. Eisenhower, launched the "Grandma's Pantry" publicity campaign.

The theory behind the catchy phrase was meant to remind everyone how granny always seemed to have plenty of food to go around no matter how many times company stopped by unexpectedly.

Excerpt from a "Grandma's Pantry" Radio Advertisement:
"Grandma's Pantry, the symbol of preparedness. Unexpected company? Grandma always had plenty for everyone. In an emergency, or during evacuation in case of enemy attack, it's too late to plan. You'll have to depend on your own resources — on Grandma's Pantry."

Mothers around the country were also bombarded with articles in lady's magazines, encouraging them to take the steps necessary to protect their family by stocking up on shelf-stable food items, as a part of the Grandma's Pantry campaign. Sears and Roebuck mass-produced exhibits in hundreds of stores to remind shoppers to buy extra jugs of Tang and Hawaiian Punch, ample boxes of cereal, candy bars, and copious amounts of canned soup.

As the decades rolled along, still under an intense threat of nuclear war, government officials finally figured out Tang and cornflakes rations just were not going to cut it. After all, the panicked fleeing masses simply were not going to be able to pack all of the Grandma's Pantry food stockpiles with them to a community shelter, or have a place to store it in their allotted 10 square-feet space, once they arrived.

Heating food inside of a fallout shelter also proved to be a problematic concept for the planner. The powers that be ultimately decided

that the doomsday diet had to be something lightweight, small, that did not need to be cooked or mixed, and that could be both rapidly and easily reproduced on such a monumental scale as had never before been undertaken in the history of the republic.

The Eisenhower administration embarked on the quest to develop the perfect "Doomsday food." The requirements were stark: America's Armageddon ration needed to be nutritious, cheap, easy to eat, shelf-stable, and reproducible at mass scale.

Taste, visual appeal, quality, packaging, and all the other attributes that normally come with designing a successful, mass-produced consumer good would be discarded in favour of the simplest food the government could design.

Why Bulgur Wheat?

In 1958, the United States Department of Agriculture, along with the Department of Health, Education, and Welfare, spearheaded the search for a perfect Armageddon entrée.

The agencies decided that Bulgur, a parched wheat, was the perfect base for a survival cracker. It is a high-in-fibre, shelf-stable, whole-grain wheat that boasts a nutty flavor and was very inexpensively available in great quantity.

During testing, researchers found the bulgur wheat-based crackers had only a mild decrease in flavor after being stored on a shelf for 52 months.

Bulgur wheat is a whole grain that is made from cracked wheat. It boasts a fibre-rich content that could help improve both gut health and enhanced digestion. Bulgur wheat is also jam-packed with vital vitamins and minerals - another reason it was chosen by government researches as the base ingredient for the doomsday crackers.

This type of wheat possesses twice as much fibre as brown rice and about four times as much folate content. Bulgur wheat is more nutritious than rice and can be substituted for rice in nearly any cooking or baking recipe.

After bulgur wheat has been processed, it does not need to be cooked before it can be consumed. The only downside to bulgur wheat is the increased amount of natural oils that often go bad when stored in warm areas in a kitchen.

Cranking Out the SHTF Crackers

The survival crackers could be mass-produced at a rate of about 37 cents for a whole day's worth of food for one person.

The only problem that the federal government faced now involved getting enough factories on board to divert their operations to creating the doomsday crackers.

Approximately three million bushels of the Bulgur wheat were waiting to be transformed into 150 million pounds of survival crackers.

The Fisher Flour Mill located in Seattle was the only factory making the doomsday hardtack biscuits at the time. The plant simply could not crank out the amount of crackers needed to feed at least 50 million people fast enough.

Pentagon officials met with American cereal manufacturers in late December of 1961 to team up on the doomsday survival cracker making project. About $4 million and five months later, Kroger, Nabisco, United Biscuit Company (now Keebler), Sunshine Biscuits, and the Southern Biscuit Company started baking the fallout shelter cracker recipe.

By the end of 1964 a little more than 20 billion survival crackers had been made and sealed in airtight tins. The tins of doomsday rations were then shipped to all of the caves, public buildings, and government mountain bunkers, serving as fallout shelters.

The doomsday crackers contained 125 calories each, were about ¼ of an inch thick, and 2 inches square in shape.

Nuclear war survivors were supposed to consume six crackers along with carbohydrate supplements (a hard candy type item) and a small amount of water, each day.

The survival diet would provide around 700 calories per person each day on the projected 14 days stay inside of a fallout shelter.

The starvation diet would not prevent weight loss or hunger pangs but would keep the survivors alive.

Even though World War III did not occur, the crackers were tested annually for freshness and finally put to good use during the 1970s.

During the early part of the decade the doomsday survival crackers were used in international aid efforts, to feed survivors of natural disasters, and in famine relief programs.

In 1978, the federal government issued a recall on all tins of survival crackers remaining in former fallout shelters and basements.

Discovery of still intact tins of doomsday crackers from the Cold War era are still found once in a while, prompting taste tests that are shared via YouTube.

Each cracker holds about 150 calories.

Survival Crackers Recipe: Ingredients and Supplies

- 2 teaspoons of salt
- 2 cups of Bulgur wheat flour
- 1 cup of water
- mixing bowl
- sharp knife
- mixing spoon
- cooking sheet
- straw or clean nail.

Directions:

Preheat the oven to 375 degrees. Combine the salt and Bulgur flour together in the mixing bowl.

Pour in the water gradually, stirring as you pour.

Knead the dough with your hands. The dough will be sticky initially, but as you keep kneading it, the stickiness will dissipate.

If the dough continues to have a sticky texture, slowly sprinkle just enough Bulgur flour to take the tacky feel out of the dough as you kneed it into shape once again.

Roll out the dough on the countertop or wax paper after sprinkling the surface with a bit of Bulgur flour to ensure that it does not stick to the surface.

The dough must not be any thicker than ½ inch or it will not bake evenly and thoroughly all the way through. Use a sharp knife to cut the flattened dough into nine equal rectangles or squares.

Use a straw to make a grid of five circles in each rectangle or square. Place the doomsday rations onto an ungreased baking sheet. Bake the doomsday rations for 30 minutes.

Remove the crackers from the oven and carefully flip them over and bake at 375 degrees for another 30 minutes. Remove the doomsday rations from the oven and allow them to cool completely.

They should be slightly browned on each side. Depending on your oven as well as on the climate in your area, the baking time may need to be adjusted to avoid burning.

Doomsday rations have been known to last for many years without the use of any special protective storage bags. For best results, I recommend storing the survival crackers in either a Mylar pouch or a Ziploc baggie.

How To Make Homemade Spam

Are you a fan of Spam? No, not the junk email kind…the meaty canned mix that's **been around since WW2, when it was a much** loved (or loathed) troop staple. It's ubiquity and reputation were such that American GIs even labelled Spam as the "ham that failed the physical."

A portmanteau of 'Spice' and 'Ham', Spam is a cultural and culinary icon. Originally marketed to busy housewives as 'the miracle meat' that didn't need to be refrigerated, Spam's big selling points included the possibility of enjoying it hot or cold, straight from the can, in countless Spam-based recipes.

Soldiers on Spam

During the war effort, millions of cans of Spam were shipped to troops as a low-cost, filling, nutritious staple that was easy to transport and store for months on end. Inevitably, it quickly became the scourge of soldiers who had to eat it virtually every day in some form or another.

It even inspired some of them to think up increasingly creative ways to express their frustration at being served Spam for breakfast, lunch and dinner. One anonymous poem ends with the lines:

"And thus the endless cycle goes;
It never seems to cease —
There's Spam in cake and Spam in pie
And Spam in rancid grease."

The reference to Spam in 'rancid grease' is particularly appropriate; one of Spam's extracurricular wartime uses was as a lubricant for the moving parts of guns.

Pioneering soldiers used the greasy meat residue to waterproof boots and tents, before enjoying a game of poker played with Spam slices inked with card markings. The empty tins weren't wasted either – they were often pressed into service as pots and kitchen utensils.

A Spam Festival?

Feelings about Spam during the war years might have been mixed, but today, Spam is still so loved in Hawaii, following the military presence there during WW2 that the locals have an entire festival dedicated to it!

Despite its rich history, if you think Spam doesn't exactly set your culinary world alight, then we might just have a surprise for you. Try the homemade version!

Homemade Spam is tender and delicious and can form the basis of countless sandwiches and meals. The ingredients are few, the method is easy, with no professional equipment required, and the results are seriously mouth-watering.

Serve up some nostalgia with a few slices fried up with eggs, or in a grilled cheese Spamwich, or be a little fancier and stir-fry chopped Spam with Chinese rice or noodles.

Here's how to get some homemade Spam into your life:

Ingredients:

- 5 lbs pork shoulder
- 1 lb ham
- 2 tbs + 1 tsp Tender Quick (order online if your local store doesn't stock it)
- 3 tbs sugar
- 3 tbs corn-starch or potato starch
- 1 tbs Kosher salt
- 1 cup ice-cold water

Method

Pre-heat your oven to 250°.

If you have a bone-in piece of pork shoulder, remove the bone with a sharp knife and set aside.

Dice the pork shoulder meat into stew-size pieces, leaving the fat attached to the meat.

Again, without trimming off any soft fat, dice the ham into the same size pieces as the pork shoulder. Spread the cubed meats in an even layer on a tray and place in the freezer for 45 minutes to firm up.

Meanwhile, make your curing slurry. Mix the Tender Quick, sugar, corn starch and salt in a bowl with the ice-cold water until the dry ingredients are dissolved.

Set the bowl to one side while you grind the meats, either pushing them through a grinder, or using a heavy-duty food processor (you

might have to work in batches with this option).

Combine the ground meats in a large bowl and pour over the slurry, mixing everything together really well, preferably with your hands.

Once everything is thoroughly mixed, press the mixture into a bread pan and securely double-wrap the pan with aluminum foil.

Place the smaller oven pan into a larger pan and pour cold water into the bigger pan, so that it fills up three quarters of the way up the side of the smaller pan. Place the pans in the pre-heated oven for 3 - 3 ½ hours.

After the cooking time is up, remove the pans from the oven and make sure that the centre of the loaf has reached an internal temperature of 155°.

Take the pan out of the water bath and place a heavy weight on top of the foil and leave it until it cools completely.

Once cooled, place into the refrigerator – with the weight in place – overnight.

The next morning, remove the weight and foil, and loosen the edges of your Spam with a butter knife.

Slide it out onto a plate and slice!

What you'll notice immediately is the rich, delicious, savory jelly that surrounds the meat.

If you can resist eating your homemade Spam right away, store in the refrigerator for up to 5 days or freeze in parchment paper-wrapped slices.

The juicy, tender, meaty texture, and that appetizing jelly form a killer combination that guarantees that the first time you make homemade Spam will not be the last!

For a longer shelf-life, Spam can also be canned.

The Superfood Used By Japan's Elite Assassins On Month-Long Missions

History is filled with unique characters and unique groups of people, many of whom we can learn things from. Each of these groups had to find a way to survive the hardships of life, oftentimes overcoming great obstacles along the way. Others became great obstacles to their neighbors, either by fighting wars with them or by stealing their resources.

One of the most remarkable of these groups in history are the Japanese Ninja. They were probably the world's first "snake eaters", although I doubt that snake was on their diet. Rather, I'm using this term as it is used in the military, in reference to all types of commando units.

Today's many special operators all trace their roots back to the British SAS (Special Air Service), a clandestine special forces or commando unit of the British Army formed at the beginning of World War II.

Like the SAS, the Ninjas had to develop their own methods, equipment, and even weapons, as there was nobody for them to copy from. Looking at it from this side of history, we can see that they excelled in this most necessary military art.

Ninjas may have been great clandestine warriors, but they were also great inventors. Pretty much everything they used was unique to their clan.

While they were experts in the use of the Samurai's Katana sword and the bow, they

were also experts in a wide variety of other weapons that the Samurai didn't use.

Their history of invention didn't end there. Ninjas were interested in many areas, such as herbal medicine. Their studies in this area led them to create their own survival foods, which they would use when on their missions.

These included foods like hyourougan, kikatsugan and suikatsugan. Of the three, suikatsugan supposedly had some amazing properties, such as giving the ninja the ability to go without water.

Suikatsugan supposedly restrained the thirst of the ninjas, allowing them to go as much as 45 days without water, if they ate just three of these small superfoods. That's probably an exaggeration, as we can normally go a maximum of three days without water.

Even with the highly disciplined lifestyle they lived and the rigors they normally put their bodies through, going 45 days without water would be too much of a stretch. However,

siukatsugan does cause one to salivate, giving the appearance that one could go without water.

While this superfood may not actually do what the ancient writings postulate, we can be sure that it was a compact, healthy source of nutrition. While on a mission, ninjas needed to save every ounce of weight they could.

Their day-to-day life was rigorous, so as to train their bodies for the hardships of the missions they undertook. Foods like this were not eaten carelessly, but rather, they were developed with care over a considerable amount of time.

Preparing the Ingredients

My curiosity being aroused, I went about to making my own ninja superfood. The first challenge was in finding the ingredients, as they are not things that I commonly buy at my local supermarket.

All of the ingredients needed to be ground up and mixed together, forming something with a consistency roughly like that of cookie batter, albeit a lumpy cookie batter. In the interest of maintaining at least a small part of the origins of this food, I chose to grind the ingredients with a Mexican mortar and pestle, called a "molcajete."

These are usually made of porous volcanic rock, but I have one that is made of granite. While not polished like a Japanese one would be, it's still fairly similar.

You could probably accomplish the same thing using a blender or food processor; but you would lose the feeling of "authenticity" doing so. On the other hand, you would save a considerable amount of time, which would make the process more enjoyable.

Licorice Root

Licorice root is good for a variety of stomach ailments, including ulcers, heartburn, and ongoing inflammation of the stomach lining. I had to purchase mine online, as I was unable to find it locally.

It came shredded in a bag. While the root does not naturally taste much like licorice when eaten alone, it did add a distinct licorice flavor to the mixture.

It was difficult to grind up the licorice root with the mortar and pestle, probably because the licorice root was already shredded.

I suppose it could have been left in shredded form, but that might have been difficult to chew and digest. I was able to grind it into considerably smaller pieces, but it took a lot of work to do so.

Kudzu Starch

Kudzu, or Kuzu, starch is a common ingredient in Japanese recipes, used predominantly for thickening sauces.

It provides a bright, translucent quality without adding a starchy flavor.

However, being a starch, it is a good source of carbohydrates, which the body quickly turns into sugar for energy.

Kudzu starch is an anti-inflammatory, which is also good for treating stomach disorders.

I ended up buying this ingredient online as well. The starch comes in chunks, such as those shown to the right in the mortar above. These are easily crushed into powder, making them the easiest ingredient in the recipe to work with.

Once mixed with the other ingredients, this one dissolves and probably works as a binder to hold everything together.

Dried Plums

Dried plums are a great source of nutrition, carrying a wide variety of vitamins and minerals, as well as fiber and antioxidants.

If you have trouble finding these in your local grocery store, look for prunes, as for some reason, dried plums are commonly known by this name.

Prunes are common, making them the easiest ingredient to come up with.

This ingredient probably provided most of the nutritional value of the suikatsugan, including a fair number of calories.

Before grinding the dried plums, dice them with a knife. This will cut up the skin, helping ensure that when you grind them, they don't stick together in large lumps.

I ended up adding more after my first grind, and got a bit lazy dicing and grinding them. That made my mixture lumpy and forced me to go back and mash it again.

Since the finished suikatsugan is supposed to be rolled in small balls, we want to mash this as well in the mortar and pestle. While it would theoretically be possible to use it diced, you would need to roll the finished product into larger balls.

Mint Leaves

Japanese mint is all but impossible to locate here in the United States. About the only thing you can do is to buy the plants online; but even then it is hard to find this plant.

Fortunately, according to an old botanist I ran across, Japanese mint is almost identical to Spearmint, which is relatively easy to find. I was able to buy spearmint in the garden section of my local home improvement centre.

It is the mint that provides most of the health benefits of the suikatsugan, and it is also the ingredient that helped the ninja deal with thirst. Japanese mint is used for the treatment of digestive problems, fever, pain, spasms, headaches, toothaches, cramps, earaches and a host of more serious medical problems.

Based on the information I have been able to find online regarding Japanese mint, as well as the information I could find about spearmint, one is a reasonable substitute for the other. Grinding the spearmint leaves in the mortar and pestle is all but impossible, unless you are going to make a lot of suikatsugan at one time. Instead, you can chop it on a cutting board,

just the way you would when preparing other herbs for cooking.

Making the Suikatsugan

Once the ingredients are prepared, making the suikatsugan requires nothing more than mixing them up. I first tried mixing them with a spoon, which was a joke. The plum paste stuck to the spoon and everything else then clinged to it.

Nothing got mixed. I ended up mixing it with my fingers, which is probably the way it was originally done. Not only is this a very efficient way to mix everything together, but you've got to get your fingers into the mixture to make the balls anyway.

As far as the ingredients go, these are the approximate measurements:

- 1 part chopped Japanese mint leaves (or spearmint leaves)
- 3 parts ground kudzu starch
- 5 parts ground licorice root
- 10 parts plum paste

A small amount of water might need to be added, in order to get the dry ingredients (licorice root and kudzu starch) to mix in. Don't use too much water, as it will make the mixture too soggy and hard to work with. I used about a thimbleful and that was almost too much.

The finished mixture should be rolled into balls about 1 cm in diameter, and then put out to airdry.

Taste Testing

After going through all this work, making the suikatsugan, I couldn't just end the project by making the balls and taking a picture of them. I knew you would be curious about their taste, and honestly, I was curious myself. So, I tried it. I was prepared for a bad taste… but in the interest of science and all that…

It was surprisingly good. I could easily detect the different flavors of the mint and licorice root, as well as the dried plum which formed the foundation. While it was an unusual combination of flavors, they actually went well together. I was pleasantly surprised.

Even so, I'm sorry, but I'm not going to try going 45 days without water, not even after eating three of them, which supposedly are enough to keep a ninja from needing water. I can see how the suikatsugan could give someone the illusion that they don't need water, as the strong flavors of mint and licorice do make one salivate. So, if you were in a place where you didn't have enough water, I can see how eating suikatsugan would alleviate your thirst, at least for a short period of time, but you're still going to need water once that feeling goes away.

On the other hand, suikatsugan should be a good survival food. Not only does it provide a good punch of energy, but it also has a great mixture of nutrients. The medicinal qualities of the various ingredients would probably help your body deal with lack of food or lack of a balanced diet. So, I can definitely see how it

could be a good food item to pack along, either in your bug out bag or as part of your survival stockpile.

Maybe trained ninja could go longer without water than you or I; I wouldn't be surprised. But then again, it was expected of them to either die while performing their mission or commit suicide after successfully completing it. So I doubt that the full 45 days have ever truly been tested; they were probably gone before reaching that point.

Shelf Life

Since the ninja didn't have refrigeration or chemical preservatives, we have to assume they were limited to more basic means of preservation, specifically dehydration and the use of salt. Most of the ingredients used for preparing suikatsugan are dehydrated.

I never found any information on how long it would last stored, however, I have kept it stored for several months, just packing it in an airtight container and leaving it at room temperature.

While I'm not ready to say that we could store it for 20 years as a survival food, it looks to me like it would last for a considerable amount of time without any special means of preservation.

How To Make Bread On A Stick

Our relation with modern conveniences is a funny one. We cannot bear to live without them. Refrigeration and toilet paper are things that preppers get crazy over.

We have been going to the bathroom ever since we used to live in trees, and toilet paper was only created in the early 1700's, and likely wasn't widely available until much later. And yet, before even thinking about food and water, preppers stock up on toilet paper.

The same story could be said for refrigeration, which is even newer to our civilization. We want to keep foods around forever in the fridge and freezer. How on earth did we survive before the modern kitchen appliances were invented?

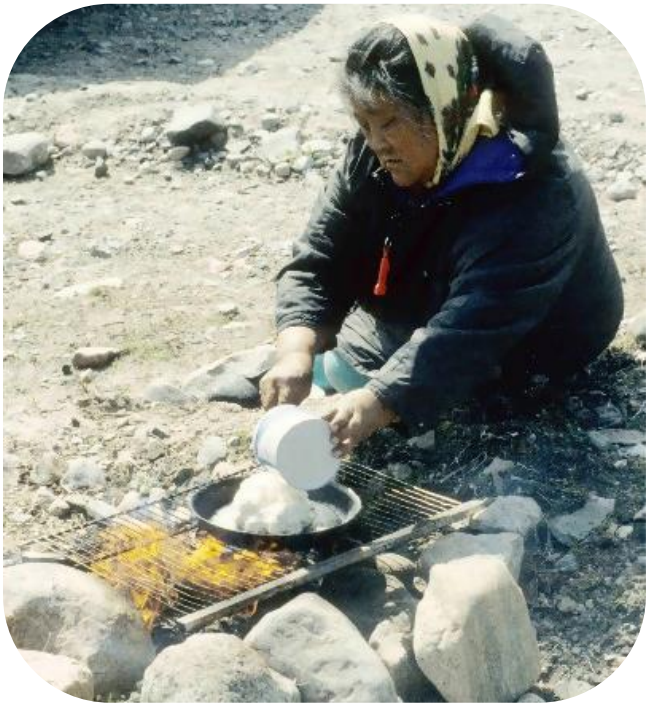
Creating Our Own Long-Term Food Storage

Food is one of the top three resources as far as preppers are concerned. At least it should be. Don't fall victim to the idea that you are going to grow a big garden and hunt your way to prosperity. If it were that easy, we wouldn't have grocery stores all over the place.

Our ancestors understood this was no easy feat and they learned how to can, preserve, and make foods that had a long shelf life. Things like pemmican and hardtack were made in order to extend the shelf life of things like flours and meats.

Another important food that was produced for this same reason is bannock. Bannock is a very interesting food because we are unsure if it was European bread brought back to Europe by

natives in the Canadian wilderness or vice versa. No matter its origin it was a bread made by the Cree people, who produced it because of its long shelf life. It was made from kneaded dough that was cut into portions and wrapped around sticks. The Cree Bannock would then be cooked over a fire and enjoyed by the fireside or stored for later use.



The Cree People

They were a wide birthed tribe that spread all over the territory which is now central Canada.

The fur trade truly favoured the Cree in its early days and the population of this tribe exploded! The Cree lived on the northern plains. Their lifestyle was similar to that of most Native Americans.

The Cree lived in teepees and hunted bison on the plains. Because of their struggles on the harsh plains, food like bannock was well suited. They didn't always get a buffalo, and this bannock undoubtedly filled the bellies of hungry unsuccessful hunters of the Cree at some point in history.

Making Cree Bannock

Another reason for which bannock is such a great survival food is that it's easy to make. It's a basic mix of flour, water and baking soda. What makes it unique in this chapter is that we are also going to cook it on a stick. Bannock is often cooked in a pan over the fire or in an oven.

Ingredients

- 3 cups of flour
- 1/2 cup of lard
- 2 TBSP of baking soda
- 2 pinches of salt
- 2 ¼ cups of water

Process:

1. Start the process by mixing your flour and lard together. You can use two forks to mash the flour and the lard together. Bakers often use a method called "cutting in", that uses two butter knives to slice butter or lard into the flour repeatedly.

2. You basically want to spread the lard throughout the flour before adding water. Otherwise, you are going to have a big lump of flour, baking soda, salt, and water on one side, and a lump of lard on the other. So, take your time and mix the flour and lard thoroughly.

3. Next you are going to add the baking soda and salt, and you can even add dried fruits like raisins or currants if you like.

4. At this point you can add your water. In the beginning it will look like a stodgy mess, but as you keep mixing, the dough will start to come together.

5. From here you are going to need some cooking sticks. You might have some metal ones that you use to cook hotdogs and marshmallows on, or you might even have some of those bamboo skewers.
   If you don't have any of the above, just look for a good, clean stick to wrap your dough on.
6. It helps to run that stick over the fire a couple of times to burn off anything harmful that might be on it. You cannot see bacteria, but a few licks of flame can get rid of it.
7. Divide your dough into four portions. These are going to be what you wrap around each of your sticks.
8. Tightly wrap your dough around the end of your stick. Be sure that the dough is secure so that it stays on the end of the stick during cooking.

9. You can hold the bread over the flames if you are planning on sitting around the fire. Otherwise, you might want to get a Y-shaped stick and prop your stick over the fire.

10. Turn it a couple times until it's brown on all sides. Then it will be ready to go.

Your bannock can be eaten right away, or it can be stored long term. Just like bannock cooked over a fire, this bread will last for at least a couple of months. For optimal storage, you should remove the stick and keep the bread covered, to protect it from bugs. You could store it in a satchel of some kind if you are in the wild.

At home you can place these in a Tupperware container, or you could even freeze them! The bannock will keep for months, and you will also have your dried fruit in there to add texture and flavor.

What the Cree bannock presents, aside from being a great food to store, is the importance of having access to grain and knowing how to use it. To the untrained eye, a pile of flour, baking soda, and some water might not look like much.

These ingredients can feed armies if you know how to harness them. Add some cornmeal and you really have the base for many great foods.

We learn the principle of managing scarcity when we study the native peoples of a region. That is priceless and forgotten knowledge.

How To Make Yeast For Long-Term Storage

Yeast has long inhabited the planet Earth, a simple organism that is hundreds of millions of years old. It plays a vital role in the creation of alcohol, as the fungus turns sugars into the intoxicating brew of choice. Without yeast there would be no beer, wine, vodka, champagne, and others.

This ancient fungus lives all around us and we only create an environment that it likes, to take advantage of it. Most people buy yeast in its dried form from the supermarket. This is because it's the fastest method for getting your hands on usable yeast. It's dried and activates in minutes.

While home brewing has become very popular, with the advent of craft breweries, yeast is used mostly for raising bread and baked goods. Pizza crust is another popular use for it. When you have traditionally baked bread, you are tasting the regional flavor of the combined yeast and water of the area. These are all important parts of using it. It adds things.

So how does it make bread rise? Well, as it consumes the sugars and breaks them down, the yeast releases gas. Yes. Little bubbles of gas – mostly carbon dioxide – are what make bread and pizza rise. Without those little guys we would all be eating flatbreads morning, noon, and night.

Potato Method of Harvesting Natural Yeast

Making yeast with a potato is so simple it's ridiculous. There is no reason why you

wouldn't have it on hand at all times, if you have potatoes. You are merely getting out of the way of a natural process.

#1. Wash your potato off and slice it in half. You can peel it if you want, but you can scoop the meat of the potatoes away from the skin pretty easily when it's finished cooking.

#2. Place your potato into a small saucepot and cover it with water. Then bring that water to a boil.

#3. Cook the potato until a fork is inserted in the center and can be pulled out without resistance. The easier to mash, the better.

#4. Pull the water away from the heat and re-

-move the potato. Keep the water. It's now full of starch that yeast loves to eat.

#5. Let the potato cool a bit and then mash it well with a fork.

#6. Add the potato to a 1-quart mason jar. Then fill it up with the potato cooking water.

#7. Add a ¼ cup of sugar and a teaspoon of salt to the mix in the jar.

#8. Cover with cheesecloth and place it in a dark warm place so the yeast can start blooming.

#9. After about 2 days you are going to see the yeast bubbling into the jar and then you will know it is in there and it's ready.

Creating a Biga or a Sponge

If you want to get the most out of your homemade yeast and bake the best bread possible, you are going to use it to create what is called a biga or a sponge.

This is when you take a portion of your flour and yeast from a bread recipe and allow it to mingle for a day or so before making the bread. You mix up a batter consistency of these two ingredients, cover it, and keep this mix in a cool dark place.

If your recipe calls for 4 cups of flour and 1 tablespoon of yeast, you will want to mix about 2 cups of flour and 1 tablespoon of yeast and enough water to make a thick batter consistency. This will ferment and create a depth in flavor that you won't get otherwise.

You can also use a portion of your biga and sustain the rest by feeding the active yeast each day. Your sponge is literally a living, breathing entity that can be fed flour and sugar each day. It will gobble this up and all it will require is that you add these ingredients and maybe some warm water from time to time.

All of this sustainable leaving and flavor from a single potato.

Using the Yeast

A lot of articles tell you how to make yeast from various items, but never really go into detail on how to use it. If you want to turn yours into a one-time use just substitute 1 tablespoon of your fresh yeast for 2 tablespoons of a packaged one. Use the amount of water that the recipe calls for and don't deviate from that. The rest of it from your jar will eventually die and you can start over.

This yeast can be used just like store bought one in any application. However, the best method for sustaining your yeast is to use the sponge method and keep that thing alive as long as you can. If you get proficient at this, then you will have it on demand all the time and never need to buy the packets.

What Else Can Make Yeast

There are other things that you can use to make yeast. You have to remember that it is everywhere and all you have to do is create an environment that this little fungus loves.

Fruit

Crushed fruit that is covered and left out for a couple days will begin to bubble. In this situation you have yeast that is eating the sugars in the fruit.

Sourdough starter

Traditional San Francisco sourdough actually gets its unique flavor from lactobacillli that produce lactic acid during the fermentation process, but there's yeast in there too.

To make a sourdough starter just mix flour and water into a stiff dough, and leave it exposed to the air for a few days until it starts to turn gray. Keep feeding it with flour and water every couple of days. When you want to make bread, mix the dough then add in a quarter as much starter as you have dough.

Potato Boiling Water

I have read articles about people using the water that potatoes were boiled in to make yeast. So, instead of using our mashed potato you would eat that potato or feed those potatoes to your family and keep the water. Store that water in a mason jar with the same salt and sugar combo. The claim is that this will work just the same.

We have been harvesting yeast from the air much longer than we have been buying it in packets from the supermarket. It can be used in baking breads and things, but it is also a great way to produce your own alcohol. This is a great skill that uses naturally occurring yeast. Alcohol is one of the most powerful preps for cleaning wounds or bartering.

For daily use, however, you will use it to make bread. Making quality dough is a skill that preppers don't spend enough time on. When you start to understand making dough, you can apply that to a number of things. It's a no brainer for preppers to store things like grains and whole red wheat. Why is it not as much a priority to master the creation of doughs with that wheat?

Pluck some yeast from the air and start playing around with breadmaking. It's a legitimate prepping skill that deserves your time. You might fall in love with it!

The Viking Survival Food With A Three-Year Shelf Life

A prepper's way of life is to plan for any type of situation that might occur throughout life. One area that is a concern for many is food. It's easy to grab the non-perishables because they... well, don't perish. However, while it's easy, it can also become monotonous to dine on canned goods after a while.

So, if you are like most humans, you probably would like a wider selection to choose from, whether you are enjoying dinner at home or out on an excursion somewhere. There are limits to the preserving methods most of us know, though. Vegetables and fruits can be canned, but certain meat, poultry and fish are often difficult to keep on hand for any decent length of time. However, have you heard of salted cod or bacalao?

It's a way to store fish for longer, years even, without it going bad. Whether you purchase your fish at a local market or catch your own, you will no longer have to use it all up in a day or two before throwing it out.

Bacalao is fish which has been cured through a dry-salting method. Drying foods is the oldest method of preservation in the world. Dry fish was being made, about 500 years ago, by the Vikings, and is still popular in Norway today. Basque fishermen were seen by explorer Jacques Cartier when he discovered the mouth of the St. Lawrence River and gave it to France, in what is now Canada.

The explorer noted that they were fishing for cod. The Basque fishermen would bring cod home across the Atlantic from the rich fishing grounds off the Grand Banks. Within a couple

of centuries, the technique had been picked up in Portugal, Spain, France and the UK. Atlantic cod had become a staple food in those countries. Salted cod became a vital item in trade between the new world and the old, thus making it a portion of the so-called triangular trade.

For hundreds of years, fishing villages in Norway produced dried and salted cod from cod fisheries. These villages were centered around the area that is now occupied by the village of Reine. Prior to the collapse of the Grand Banks and other stocks due to overfishing, salted cod was made exclusively from Atlantic cod. Overfishing has caused cod to be scarcer. Bacalao can be derived from other white fish. Some of the more common

white fish that you can use to make bacalao are flounder, pollock, haddock, swordfish, tilapia, halibut, and of course, cod.

Drying salted cod in Kirkjusandur, Iceland

In the English-speaking world, bacalao is often called salted cod, because that's the fish it's most often associated with, but it can be made from almost any non-oily white fish

Someone found that adding salt made the drying process more effective. Drying preserves many nutrients and the process of salting and drying fish is said to make it tastier.

Salting became more affordable during the 17th century when cheap salt from southern Europe became available to the northern European nations.

Salting could be done by the fisherman or his family. The bacalao was sold whole or in portions, and with or without bones. The finished salted cod was transported to the market, where it was sold.

It became a major part of people's diet, and even became a staple item for the catholic nations for Lent and on Fridays, when they abstain from eating meat.

Traditionally, the fish was dried on clean rocks or cliffs, or on wooden frames. It was dried by the wind and the sun near the seashore.

Today, modern production of salted cod is mainly done indoors and with electricity. If you are going to dry your fish using the traditional method, it may be a good idea to wrap it with a foil or fine mesh, to keep insects and flies off of it. It should be too salty for insects to do it much damage anyway.

There used to be different qualities for grading the bacalao for purchase. The best grade was called the "superior extra", then "superior", "imperial", "universal", and lastly, "popular". There are still some products made of the superior quality.

If you are obtaining the superior quality of bacalao, then the fish has been line caught so you know it was still alive, whereas if it was caught with a net, then it may have already been dead by the time it was cleaned to be salted.

The "superior extra" grade is bled while still alive, and then beheaded. Then it is cleaned, filleted, and then salted. The "superior extra" will sometimes be salted twice with a rest period between, to increase the flavor.

The lesser grades of bacalao may be frozen before salting or even injected with a saltwater solution.

Even today, bacalao is used around the world to create popular dishes. For example, in Fran-

-ce and Spain they use it to make brandade, a creamy spread created with salted cod and olive oil, which is then served with bread or potatoes. In Portugal they use bacalao to make savory stews. In Europe, the salted cod is served in a variety of ways such as in casseroles, croquettes, or even breaded and then deep fried.

Some parts of the world serve salted cod for breakfast as part of a casserole with eggs.

In Bermuda, it is served with avocados, potatoes, bananas, and boiled eggs, in the traditional codfish and potato breakfast. In many of the European countries it is served as part of the celebration of Christmas Eve. In some parts of Mexico, it is served at the Christmas dinner by frying it with egg batter and then simmering it in a red sauce. There are all kinds of options for preparing this Viking dish according to your own taste. You can even cut the fillets to be prepared in various sizes: leave them whole or even cut them into strips or chunks.

Fortunately, the process of making the bacalao is quite easy. It is a bit time consuming, though, because it takes a week or two. The good news is that most of that time you simply need to wait for it to dry out. The actual process takes very little time in prep work. If you use your own fresh catch, then you will need to behead and eviscerate, or gut, the fish. You can even do this step while still on the water. Then you will need to cut it into the fillet sizes that you want.

First Stage of Making Salted Cod

We used cod for this chapter, but as mentioned above, there are other types of fish you can use. So, when you see “cod”, feel free to insert the fish of your choice.

Make sure you have the supplies on hand, which are minimal.

For the first stage, they include:

- Fish fillets
- Kosher or sea salt, medium to coarse grain
- Paper towels or dish towel
- Glass or stainless-steel container
- Refrigerator.

The first step is to prepare the fish by rinsing it thoroughly with cold water.

Then, pat the fillets dry with paper towels or a clean dish towel.

Next, pour a ½" layer of the sea or kosher salt into the bottom of the container.

Place the fish on top of the salt, in a single layer, and make sure the pieces are not touching each other or the side of the container – you want each piece to be surrounded by salt. Pour an additional ½" of salt on and around the fish. Make sure that the fish is totally covered.

If you have more than one layer, repeat the steps above, making sure the fillets are not touching each other and that each layer is well covered. It doesn't matter how many layers you put in; just bury them in salt.

Cover the fish and store it in a cold (but not freezing) place, such as your refrigerator, for 48 hours.

Drying the Fish

After it's been "salting" for 48 hours, wipe the excess salt off the fillets with paper towels or a clean dish towel.

After having wiped off the excess salt, wrap the fillets in cheesecloth. Tuck the sides in as you roll it up, the way a butcher wraps a roast at the meat counter.

Place it on an overturned baking dish or on a rack on a plate, and then put it back into the refrigerator, uncovered. Now, simply let it dry out in the refrigerator for 1-2 weeks. When it's ready, it will be dry and stiff.

Once the bacalao is ready, wrap it in paper or fine cloth and store it in boxes. Traditionally, wooden boxes were always used, and they are still the best option. The wooden boxes let the fish dry out even more. Of course, the opposite is also true – if you store it in a humid place,

the salt will soak up any moisture from the air, and pass it on to the fish, rehydrating it and possibly causing it to spoil. So it is important to keep it somewhere dry.

If you do that, it will last for at least two to three years without refrigeration. Most people now keep it frozen or refrigerated, but if it's been properly dried, that is not necessary.

If you find yourself in a SHTF situation and you don't have power to keep the refrigerator running, that won't be a problem.

Remember, this stuff was originally made to be piled up in a hut on some Newfoundland beach until fall, then carried across the Atlantic in an unrefrigerated boat. It is dry and salty enough to last for a *long* time.

The result is a well-preserved fish that you can use whenever you are ready, and that will last up to three years if well stored.

Using Your Bacalao

When you are ready to use your bacalao, the first step is to rehydrate and desalinate it. You will need to soak it in water for two to three days, changing the water at least twice a day. This will rehydrate the fillets, as well as remove most of the salt.

After this, it is ready to cook and enjoy in whatever dish you want to prepare!

How To Make Native-American Pemmican

By Lex Rooker

Editor's Note: Many thanks to Lex Rooker for writing this chapter.

Pemmican is a concentrated, nutritionally complete food invented by the North American Plains Indians. It was originally made during the summer months from dried lean buffalo meat and rendered fat, as a way to preserve and store the meat for use when traveling, and as a primary food source during the long winter months.

When pemmican was discovered by our early frontiersmen (explorers, hunters, trappers, and the like), it became a highly sought-after commodity. The Hudson Bay Company purchased tons of pemmican from the native tribes each year to satisfy the demand.

The basic unit of trade was an animal hide filled with pemmican, sealed with pure rendered fat on the seams, and weighing about 90 pounds. As long as it was kept away from moisture, heat, and direct sunlight, it would last for many years with no refrigeration or other method of preservation.

There appeared to be two types of pemmican. One was a mixture of 50% shredded, dehydrated lean meat and 50% rendered fat by weight.

The other mixture was similar, but contained 50% rendered fat, 45% shredded dehydrated meat, and 5% dried and ground berries by weight. The berries were typically Saskatoon berries, which grew in abundance in the Great Plains area and are similar to blueberries.

There is much controversy as to whether the natives included the dried berries in the pemmican they made for themselves or whether they added it only to the pemmican they sold to the Hudson Bay Company "because the White Man preferred it that way." I'm of a mind that the natives consumed it both ways.

The journals from the Lewis and Clark expedition clearly state that the Indian tribes they encountered consumed some berries, fruits, and tubers as part of their diet. It seems reasonable that the inclusion of some dried berries would not be out of character for the batches of pemmican made in late summer, when ripe berries were available.

Berries do not appear to be a nutritional requirement, and they increase the chance of spoilage, so the pemmican formula in this document is for meat and fat only and does not include them.

Please bear in mind that pemmican is NOT a raw food, as the fat needs to be heated to over 200° F in order to release it from its cellular

structure and drive out the moisture. It is therefore not recommended as part of a daily RAF (Raw Animal Food) diet.

Painting of the Lewis and Clark expedition in a canoe meeting some Native Americans.

However, it is a useful compromise when one is traveling, for use as emergency rations, or when otherwise high-quality raw animal foods are unavailable.

It is important that the lean meat used in pemmican be dehydrated at a temperature below 120°F. A temperature between 100°F and 115°F is ideal. Temperatures above 120°F will "cook" the meat and will severely compromise the nutritional value of the pemmican.

Federal and State laws require commercial dried meat products like jerky to be raised to a temperature above 150°F, which cooks the meat to a well-done state and makes it totally unsuitable for making pemmican.

Nutritional Qualities

The nutritional qualities of pemmican are unmatched when it is properly made. It can be eaten for months or years as the only food, and no nutritional deficiencies will develop. Yes, you read that correctly: no fruits, vegetables, grains, or dairy products are required to maintain perfect health—just properly made pemmican and water.

Lack of vitamin C and scurvy are often brought up as a concern. Explorers, hunters, and Native Americans have demonstrated over and over that consuming raw meat or meat that was dried at a temperature below 120°F—as long as there is sufficient fat present to supply enough calories—will maintain perfect health and prevent or cure scurvy.

Those that consume salted and preserved meats, biscuits, and other processed foods, even when lemon juice is added to their diet, will often die from scurvy or other nutritional deficiencies.

Calcium and weak bones is another concern. Due to the advertising of the dairy industry, it is believed that milk, cheese, or other dairy products are essential to maintaining good bone density.

It has been shown that for people eating a diet of meat and fat, where the animal consumed was allowed to eat its natural diet (usually grass), bones developed normally and remained strong with no sign of deterioration.

For the best quality pemmican, use red meat (deer, beef, elk, bison, etc.) and the rendered fat from these same animals.

The animals should be grass fed or should have eaten their natural diet in the wild. DO NOT include nuts, seeds, vegetable products, vegetable oils, grains, beans, or dairy products of any kind.

A small amount of well-dried berries (blueberries, Saskatoon, strawberries, etc.) is the only acceptable addition and should not exceed 5% by weight should you choose to include them.

Ingredients

Use equal amounts, by weight, of very dry red meat and rendered beef tallow. If you have one pound of dried meat, then you will need one pound of rendered beef tallow, two pounds of dried red meat, two pounds of rendered beef tallow, etc.

Rendering the Fat

Rendering fat is a simple process, and most of us are familiar with it as it is one of the end results of frying bacon. The process of frying the bacon releases the fat from the cellular structure of the meat and drives off the water.

It is the boiling off of the water that actually makes bacon pop and sizzle. The fat itself just turns to a liquid.

Our goal in our rendering process is a bit different from frying bacon in that it is the fat we wish to keep rather than the crisp "cracklins" which, by the way, taste good when they are still warm with a bit of salt. If you don't want them, they make wonderful dog treats when cool.

We also want to keep the temperature of the fat as low as possible. I try to keep it below 250°F and usually shoot for a final temperature of around 240°F.

You gain nothing by raising the temperature any higher than 240°–250°F other than more damage to the fatty acids, which we want to avoid as much as possible.

In short, you need the temperature high enough to boil off the water in a reasonable length of time, but low enough to maintain the nutritional value and not denature the structure of the fatty acids any more than necessary.

There are two generally accepted methods of rendering. One is to place the fat in a pot and heat it on the stovetop. The other is to place the fat in a roasting pan and put it in the oven with the temperature set between 225°–250°F.

The stovetop method can be completed in about one hour and requires constant attention. The oven method takes 12 hours or more but can be left unattended during the entire process. I will be covering the stovetop method here with comments on the oven method mixed in but not demonstrated.

Cut the fat into small, ½" squares. Place the diced fat in a stock pot or pan. I select my pot size such that the raw fat fills the pot about ¾ full. This gives me head room to stir and mix without slinging fat all over the stove or counter. It also fills the pot deep enough with the liquid fat that I can use a candy thermometer to keep track of the temperature.

If you are using the oven method, just put your fat in a good-sized roasting pan, pop it in the oven set between 225° to 250°F, and then go away for 12 to 24 hours. The oven thermostat will take care of the temperature for you.

Set your burner to medium–high heat and stir well about every minute or so for the first 10 minutes. This will keep the bottom from overheating while enough fat is being liberated to cover the bottom of the pan. After about 10 minutes, you'll see a pool of fat forming on the bottom, which should be merrily boiling away.

You can now rest a bit and stir every 5 minutes or so just to keep things well mixed.

After about 30 minutes, the liquid fat should be deep enough to cover all the chunks, and it should have the appearance of a rolling boil. Reduce the temperature to medium heat, and put a candy thermometer into the fat, making sure it does not touch the bottom of the pan. The water boiling off the fat will keep the temperature around 220°F for a while, but there will come a point when the temperature will start rising.

Keep stirring occasionally and keep your eye on the thermometer. As it begins to rise, lower the heat setting to keep the temperature around 230° to 240°F.

The picture bellow is after about 45 minutes. The cracklin's are beginning to turn dark in color, the boiling is slowing down, and the temperature of the fat is rising, requiring close attention to the heat setting.

After about one hour, most of the boiling action will have stopped, and there will just be small bubbles rising from the fat. Ninety percent of the cracklins will be a chestnut brown color.

The lighter chunks may have a bit more fat left in them, but it is not worth the effort to extract it. If you used the oven method, the fat in your roasting pan should have a similar look.

Now take a good-sized strainer and place it over the container where you will store your rendered fat.

Line the strainer with a single layer of paper towel. This will filter out the sediment and allow only the liquid fat to drip through.

From your pot or roasting pan, pour the fat, cracklings and all, into the lined strainer. Press on the cracklings with a serving spoon to squeeze as much fat out of them as possible.

When you've gotten all the fat you can, remove the strainer and set the container aside to cool. You can sprinkle the cracklings with a bit of salt and pepper and enjoy them as a snack, set them aside to cool for dog treats, or just discard them if you wish.

The square tub is tallow that was rendered from the fat of grass-fed animals.

It is a deep butter-yellow from the carotenoids (the fat-soluble vitamin A precursor that gives carrots their orange color) that gets stored in the animal's fat, and comes from the green grass they eat.

The round bucket is the tallow we just rendered from fat that I got from a local market. The putty color is typical of the fat rendered from grain-fed animals. There is little or no carotene stored in the fat of grain-fed animals.

There is also a major difference in the fatty acid profile of grain-fed versus grass-fed animals. The grass-fed animal fat has between 25 and 50 percent healthy Omega 3 fatty acids. The grain-fed animal's fat contains only 2 to 3 percent Omega 3. Omega 3 fatty acids are critical to the development and maintenance of our brain and nerve tissue.

Overall, the meat and fat from grass-fed animals has a far greater nutritional value than grain-fed beef meat. Therefore, if you want to make pemmican that meets all nutritional

requirements without the need for additional supplementation, both the lean meat and the fat should come from grass-fed animals.

Dried Meat Preparation

To make any useful amount of pemmican, a large quantity of well-dehydrated lean meat is required. You can use a dehydrator or set the oven to the lowest possible temperature (around 150 degrees), and put the strips of meat directly onto the rack. Leavethe oven door ajar to prevent moisture build up. Let the meat dry out for about fifteen hours, or until it is crispy.

Generally, well-dried meat will weigh just slightly less than 1/3 of its raw weight. Therefore, 10 pounds of raw, lean meat will yield about 3 pounds of thoroughly dehydrated meat.

Since pemmican is 50% fat and 50% dried meat by weight, 3 pounds of dried meat will make 6 pounds of pemmican, which will require about 18 pounds of fresh meat.

Start with well-dried red meat: beef, bison, deer, elk, etc. Make sure that the strips of meat are thoroughly dry all the way through. Any observable moisture in the meat will provide asuitable environment for mold and bacteria to grow. If the strips of meat are bent double, they should crack and not be rubbery.

Traditionally, the meat used for pemmican is dried without salt or any other seasoning. If you choose to season your meat, I suggest that you go very lightly—less than half of what you would use for jerky. Use only dry spices like garlic powder, pepper, cumin, chili powder, salt, etc.

Traditional meat drying – Photo credits: John Johnston

NEVER, NEVER, NEVER make pemmican with meat that has been marinated in soy sauce, wine, or any marinade that contains sugar of any kind and no vegetable oils of any type. I always make my pemmican without salt or seasoning and usually prefer eating it that way, but on occasion, I sprinkle a bit of salt or steak seasoning on it at the time I eat it for a change of pace. Be careful—a little bit of seasoning goes a long way for this dense food.

Grind the meat to a fibrous consistency, like a fluffy but slightly chunky mulch. I use a meat grinder with the largest plate (biggest holes) possible.

The grinder is a large #32 manual ChopRite with a 1 ½ horsepower motor mounted instead of a handle, and fitted with a “bean” plate that has 3 very large oval holes.

If you attempt to use a plate with small holes (½" may work; ¾" or larger is much better), the holes will clog, the grinder could lock up, and you may damage it. Feed one strip at a time, and wait until the exit holes begin to clear before adding the next strip. If it is too chunky and not well shredded, run it through a second time.

Alternatively, you can shred the meat either in a food processor using the steel blade or in a blender. When using these options, it will be helpful to chop the dried meat into smaller pieces, and some people pick up the blender and shake it while grinding to keep the un-ground chunks moving into the blades for a more even grind.

Traditionally, the dry meat was pounded into a powder using rocks. I've tried the pounding method using a hammer and a small blacksmith's anvil. Unless you have a lot of time and need the exercise, I don't recommend it. It is a lot of work.

Weigh the amount of ground meat that you have, and then weigh out an equal amount of rendered animal fat from the rendering process above. Fat from red meat animals is preferable for the best nutrition and preservation qualities, as it becomes very firm when cool, similar to candle wax.

No vegetable oils or butter should be used. Pork or lamb fat can be used but are not recommended as the fatty acid profile is different and they melt at too low a temperature. This can cause the fat and lean to separate in warm weather, and thus storage becomes a problem, unless you are willing to pack the pemmican in liquid-tight containers.

Melt the fat on low heat. It will start to melt at about 120°F. Try to keep the temperature of the fat below 150°F. You spent time drying the lean meat at low temperatures to maintain its nutritional value, so you don't want to deep fry it when you mix it with the fat.

Mix the shredded meat into the melted fat and stir until well blended. The completed mixture should look a lot like moist, crumbled brownies.

The mixture may look "wet", but most of the fat should be absorbed or coating the meat fibres. There should be little to no liquid fat pooling in the bottom of the pan.

Using a sturdy spoon, press the warm mixture into a mold of your choice, or spoon it into a Ziploc plastic bag and press flat, removing as much air as possible.

The gray-colored molds found in the last picture below are mini loaf pans that are slightly larger than a stick of butter and hold about 150 grams (1,000 total calories) of pemmican.

The Ziploc bags are sandwich sized and are loaded with about 300 grams (2,000 total calories) of pemmican. When pressed flat, they are about 5" x 6" x ½" thick.

Set them aside to let cool and harden. The final product will be very hard—almost like a block of wax—and will look a bit like dark oatmeal with some ground raisins stirred in.

If you are using molds such as cupcake tins or loaf pans as above, the pemmican can be removed from the mold once it is hardened, and then stored in plastic bags or wrapped in a grease-proof paper.

One convenient method I often use is to press the mixture into lined cupcake pans and then store the resulting hockey pucks with their paper liners in gallon-sized Ziploc plastic bags.

Each cupcake in a standard cupcake pan will hold about 75–80 grams (around 500 calories) if you pack them solid to the top.

If you want to keep your pemmican for any length of time, it should be stored in a dark place or wrapped in light-proof paper or aluminum foil, as well as placed in a plastic bag to keep out air and moisture.

Pemmican does not require refrigeration and can be kept for years at room temperature, as long as it is kept dry and shielded from light and direct heat.

How Much Do I Need?

One half pound of pemmican per day is about the minimum required for a sedentary adult and provides about 1,500 calories.

Someone doing light activities might find three-quarters of a pound to be more appropriate to their needs, and this would provide about 2,200 calories. Twice this amount (or more) could easily be necessary when doing hard physical labor (like digging ditches or mountain climbing).

Pemmican is the perfect food for backpacking and hiking. Ten pounds of pemmican will easily sustain a backpacker for a full week, providing one and a half pounds of pemmican per day, which would supply 4,400 calories—enough to support strenuous climbing at high altitudes and in cold weather.

The same 10 pounds of pemmican would supply food for two full weeks of leisure camping activities at three-quarters of a pound per day, providing 2,200 calories.

When made correctly using grass-fed, lean red meat, that has been dried at a temperature

below 120°F, and rendered fat from grass-fed animals, pemmican is a complete food, and no other nutrients or supplements are necessary to completely meet all human nutritional requirements. No other single food is as calorie dense or nutritionally complete.

How To Make Delicious Biltong With A 1 Year-Shelf Life

People sometimes refer to biltong and beef jerky interchangeably, and admittedly, they have some similarities. Usually, biltong is cured in larger slabs of meat, whereas jerky is cured in strips.

Biltong retains a little moisture, which some people think may shorten its shelf life, but we'll return to that point at the end of the recipe.

The other difference between jerky and biltong is that traditional biltong is sometimes made with the fat of the meat intact, whereas jerky or biltong that you intend to store for a decent length of time, without refrigerating, needs to be made with lean meat.

Ultimately, making biltong means that you can safely store meat in a really delicious and spicy way.

Ingredients

- 4.4 lbs. (2kg) lean beef or other red meat or game. Bear in mind that lamb doesn't work well as biltong.
- 3 cups very coarse sea salt
- 2 cups soft brown sugar
- 1 scant teaspoon bicarbonate of soda (optional)
- 2 tablespoons coarsely ground or crushed black peppercorns
- 4 tablespoons of coarsely crushed or ground coriander seeds
- 5 cups brown/balsamic vinegar combined with 100 ml Worcestershire sauce, or all vinegar.

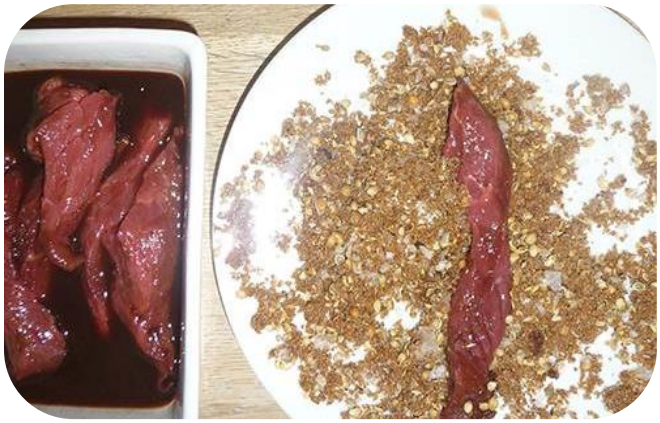
Method

Cutting along the grain – not against it – slice the meat into slabs around 1 cm thick.

Lay the meat slabs in the vinegar mix for 30 minutes. Keep the vinegar in the refrigerator, as you'll need it later.

Meanwhile, crush the spices and mix with the salt, sugar, and bicarbonate of soda (if using) before sprinkling evenly onto a plate.

Press the slices of meat into the spice and salt mixture to coat thoroughly.



Placing the thicker slices in the base, layer the meat in a clean dish, pressing any remaining spice mixture on top of the final layer. Refrigerate for 8 – 12 hours, turning the slices at the halfway point.

Remove and place in the vinegar bath again, this time for 15 minutes. Take the meat out of the vinegar, trying to rinse each piece in the vinegar solution as you do so, and leave as much of the salt behind as possible.

Squeeze each piece of meat to extract as much moisture as possible.

Now when it comes to drying biltong, you have a few options.

Oven Drying

If you own a dehydrator, then check the manufacturer's instructions on drying meat, as models do vary.

You can also try drying it in the oven, on a very low fan setting for around 6 – 8 hours, opening the door regularly to allow moisture to escape.

Suspending the pieces of biltong from the highest oven shelf, using skewers threaded through each piece of meat, works well.

Traditional Drying

If you don't live in a humid area, and you have a space that is free of flies, isn't open to passing birds, and has good air circulation, then dry the biltong in the traditional way, hanging it on meat hooks (strong, covered, large paperclips work too) for between 5 – 15 days.

You'll have to keep checking the moisture content, and the drying times will vary greatly. Even if one of your pieces of meat does go bad, chances are that the other ones will be fine, so don't lose heart.

Shelf Life

A good rule of thumb is: the drier the meat, the longer it will last, seeing as the lack of moisture will inhibit microbial action. Fat can cause it to go rancid, which is why lean meat works better for prepping purposes.

You can, of course, keep your biltong in the fridge; but at a cool room temperature, properly dried and stored biltong should be good to eat anywhere from two months to a year. Moisture is the enemy, so make sure the meat is dry, wrapped in clean, breathable paper, and kept in a well-ventilated place.

Once you have the basic technique down, you can experiment with other flavors and spices that you like. Dried chilies, teriyaki seasoning and garlic powder are popular.

The Truth About Biltong

As with so many traditional recipes, there'll always be firmly held opinions on what's right and wrong, but the one thing that seems to be true of all biltong recipes is that the delicious results never seem to hang around for as long as planned!

Aaruul - The Superfood That Helped Mongols Ride To The Gates Of Vienna

To understand Aaruul, you first have to understand a little about Mongolia. This landlocked, East Asian country is remarkable for so many reasons.

Despite being the 18th largest country in the world, almost half of its 3 million inhabitants live in the capital, Ulaanbaatar.

Nomadic Lives

Many of those who don't live in the capital, or one of the other cities (no other cities in Mongolia have a population of over 100,000) live a nomadic lifestyle. Around 30% of Mongolians still choose the life of their ancestors. Nomadic families live in large, circular gers, portable tents made of skins or felt; they travel by horse on traditional wooden saddles and drive herds of goats, horses and camels across the vast grassland steppes.

Climate change, urban migration and politics are slowly changing nomadic life in this challenging, beguiling land, with its endless blue skies and mountain ranges, but some things still remain unchanged.

A Warm Mongolian Welcome

Mongolians are very hospitable and welcoming, and you can feel it even before entering their homes. The door of a ger is always builtso that it's facing South, to invite light and warmth, as well as to act as a compass for travelers.

The herd provides much of the nomadic diet. Meat and dairy are the main cornerstones of the meal and among the offerings will be Aaruul. This distinctive dish of boiled and dried dairy curds is how herders preserve the milk of their animals. It can last for months without being refrigerated and is the perfect source of vitamins and nourishment for a nomad in winter.

Making Aaruul

Traditionally, Aaruul is wind and air dried, but it's possible to prepare a version at home using a domestic oven. Sugar and wild berries can be added to Aaruul for flavor, but we're making the plain version here.

You might think that any recipe that begins with, 'First, curdle your milk...' might make you have second thoughts, but do try this. A dairy snack that can rattle around in a saddlebag for months? Got to be worth a try, right?

This recipe can be easily multiplied, although you probably won't need to increase the amount of lemon juice too much – one whole lemon is usually enough for larger amounts of milk.

Ingredients

- 16 fluid ounces full fat milk
- 1 oz live yoghurt
- Juice of ½ lemon.

Method

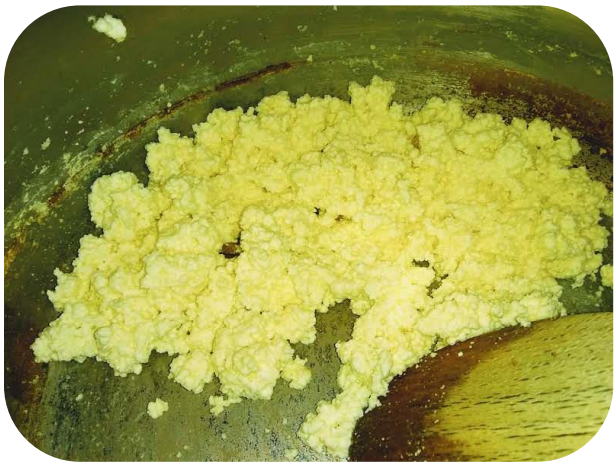
Switch your oven on to 300 degrees F.

So, we need to curdle the milk…you're aiming to separate the curds from the whey, which Mongolians would do with kefir, a thin sour yoghurt. Kefir can be hard to source, so we're using regular yoghurt and lemon. Heat the milk in a large pan and turn to a simmer once it starts boiling.

Stir in the yoghurt and lemon juice and keep stirring until the curds separate from the whey.

When the white curds have formed, carefully drain through a muslin or fine sieve (don't discard the whey – it's full of good nutrition).

Return the curds to the pot over a low heat, stirring until the moisture has evaporated and the curds are yellow and crumbly.



Spread the curds in a thin layer over a baking sheet and cook in the oven for around three hours, removing them once they're hard, pale and dry.

Arguably, this recipe is similar to another Mongolian dairy recipe, Eezgii, which is usually made with the first, fatty, spring milk, and roasted in the oven to give a caramelized taste.

However, since most of us cannot replicate the drying and pressing of Aaruul curds on the roof of our ger, this is the closest we can get, but feel free to experiment with air-drying if you live in a suitable climate.

Traditionally made, air-dried Aaruul will arguably last indefinitely.

Aaruul made in a domestic oven, completely dried out until hardened, should last for at least 2 – 3 months, if kept dry and loosely packed in a paper sack.

Go outside and pop a piece of Aaruul in your mouth, then turn to face the wind wherever you are and imagine for a moment that you're on the vast steppes of Mongolia, warming your face in the sun that shines for 257 days a year.

What a way to get a taste of another lifestyle!

Making Boiled Butter, Ghee, Or Clarified Butter

Do you remember when the medical establishment told us that eating butter was killing us? How many years did you subscribe to a low-fat or no-fat diet based on these recommendations?

Maybe you even bought the trans-fat laden butter alternatives that turned out to be much worse for you than any natural fats ever could be!

We have been eating butter for a LONG time. While you might think of the blond girl churning butter by hand, it was part of the human diet thousands of years prior to that.

The first butters came from Africa and would have been sheep or goat milk based. It would have likely been a bit fermented, as well, due to the temperature and lack of refrigeration.

The milk would be sealed in a goat skin and hung on a tripod. Using the tripod, the goat skin container and the milk within would be rocked back in forth until the butterfat was separated from the buttermilk.

Of course, one of the biggest problems with making butter is that it spoils without refrigeration. So over time societies have figured out ways to make butter last much longer.

What is Butter, Really?

Butter is an emulsification. In fact, it's probably the oldest emulsification that man discovered. Another popular emulsification is salad dressing.

Things like balsamic vinaigrette and Caesar dressing are an emulsification of oil and other ingredients that are whipped together in a way that settles the fat globules throughout a liquid that would not normally mix with them.

It is the oil and vinegar union that makes salad dressing both rich and tangy.

Butter is also an emulsification using the milk proteins. This emulsification is what makes heavy whipping cream go from pourable to hard in the fridge.

How to Make Butter with a Mason Jar and a Marble

While you could go to the store and buy a couple pounds of butter to boil, knowing how to make it is a much better idea. We could be moving into an age where our astounding convenience is no more.

Fill a mason jar about 1/3 of the way with heavy whipping cream. Drop in a single, clean, marble.

Place your lid on the mason jar and begin shaking. The volume of that cream will start to increase and before long you will have whipped cream. Carry on shaking. You will see separation in that mason jar.

At this point you can dump your mix out into a cheese cloth. Shape the cheesecloth and its contents however you like.

Once this cools in the fridge it will be butter all the same.

Making Boiled Butter, Ghee, or Clarified Butter

These three terms are basically interchangeable. They represent a butter that has been separated by heat, and its impurities have been skimmed away. Then the clear liquid fat is poured off the residual liquid layer below it.

This has a higher smoke point than butter because these other ingredients are removed. More importantly, it has a substantial shelf life without refrigeration. For a prepper, this is important to know and to take advantage of.

High quality clarified butter can last up to 12 months at temperatures ranging from 40 degrees to 65 degrees.

Ingredients and Tools:

- Tall Pot or Sauce Pot (the taller and thinner the better. Wide pots make skimming and separating the boiled butter much harder.)
- 2lbs of Butter

Method

While we are not actually going to boil the butter, we are going to destroy the emulsification that creates butter.

All that churning and shaking can be disrupted by heat and you can break the butter down, back into its base elements.

There is really no set amount of butter you need to clarify it. The more you use the easier it is.

It might be nearly impossible to clarify butter if you have only 1 stick. It's just harder to separate.

Slowly heat all the butter at once in your tall saucepot or pan. Heat it over low to medium heat.

After about 5 minutes you are going to see the butter begin to separate. After 10 minutes you will have hot butter that is completely separat-

-ed. You are going to have a white skin that is over the top of your butter. You want to skim that out.

Use a ladle and just skim the whites off the top. These are milk solids.

Next you are going to pour off the golden clarified butter. However, you must be careful.

Lurking below that golden *boiled butter* you are going to find a layer of water and proteins in a white milky layer. You don't want that stuff.

Pour off as much of the golden stuff as you can, and then try and skim the rest off of the milky layer.

This pure, golden clarified butter is what you can store in a mason jar for months!

Using Your Boiled Butter

Clarified butter really shines when it comes to sautéing and pan-frying foods. It's a precious fat and can be used in many ways that other fats can't.

It's also a great addition to batters. Use clarified butter instead of vegetable oil and your baked good from batter will have a much richer taste.

Many people don't even store extra food so, I am sure they don't have extra cooking fat. Your boiled butter with a 12-month shelf life might barter like gold in a collapse situation.

It's certainly worth having a few extra jars around.

Conclusion

The process is very simple, and the rewards are big. Clarifying butter can be a little expensive, but it offers you an answer to grid down butter and a cooking medium that has many benefits.

Get a couple pounds of butter and give your own clarified butter a try!

It's a popular pick of chefs and has even been used in Hindu spiritual ceremonies. We are more tied to this stuff than you might think.

You need to invest 20 minutes to the process and you will have a long-term food storage option that is much better than vegetable oil or shortening of any kind. If food is important to you, get to know this reliable boiled butter.

How To Use The Bark Of This Common Tree To Keep Your Meat From Spoiling

There are many things which have been lost in the halls of history. Those who have gone before us had ways of doing things that we can't even imagine.

In some cases, those ways were more ingenious than our own, as they found ways of doing things, without the technology we so much depend on.

Sadly, many of those methods are lost to us, especially in cases of groups of people with limited written language, who passed on lessons verbally, rather than through the written word.

These people would have to know how to do a plethora of things on a daily basis, just in order to survive. Rather than sending their children to school to learn, parents would teach these skills on a daily basis.

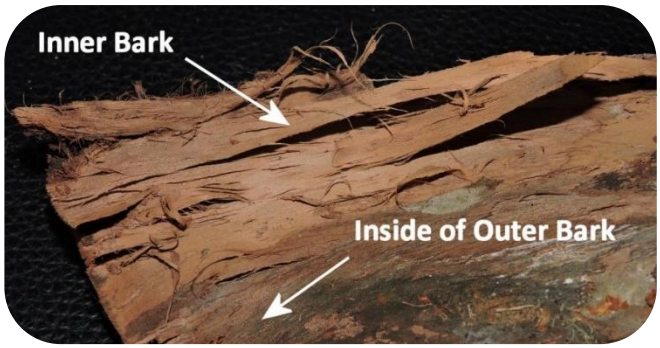
The American Indians were one of these. They knew how to do countless things which are uncommon today. Some of these were recorded by the white man, in the early days of colonization and pioneering. But many more were never written down, which is our loss today.

Food was a major concern of the American Indians, especially the more nomadic tribes, like the Plains Indians. They were highly dependent on hunting and gathering, and as such, they let little go to waste. Indians used every part of an animal they killed; if not for food than for some other purpose.

Preserving meat was a challenge in these times. We are all familiar with smoking and making jerky, but believe it or not, those weren't the only means of preserving meat that the American Indians used. There may even have been many different ways that they did so, depending on the part of the country.

One such method used the inner bark from the slippery elm tree. This tree is fairly common throughout the eastern part of the United States and into the Midwest, as well as the eastern part of Canada. The tree can grow 50 to 60 feet tall and has a heavy grey-white bark.

But it is the inner bark or "phloem" we are concerned with. This is the living part of the bark, through which food is passed through the tree. It is constantly being replaced, with the old phloem drying out and becoming part of the bark.



Why Slippery Elm Bark?

The inner bark of the slippery elm tree is actually rather amazing, being used for medicinal purposes as far back as the 1st century. It is useful for treating wounds, sore throats, coughs, and a number of other health problems.

Technically, it is the mucilage and tannins in the inner bark which provide those benefits. It is the mucilage that is useful for treating problems with mucus membrane, such as sore throats. The tannis has strong astringent properties, making it useful for skin irritations.

It also has antibacterial properties, which are important for preserving meat. It has also been discovered that the inner bark provides anti-oxidants.

Unless you live somewhere where slippery elm trees grow, you'll have to order your slippery elm bark online, as I did. It comes already shredded, making it extremely easy to use, either as an herbal remedy, or for the purpose we're looking at it for right now – preserving meat.

Preserving Meat Using Slippery Elm Bark

Since we're looking at this as a method that the American Indians used, we want to use it as much as possible as they would, rather than how we might think of using it in modern times. They didn't have electric blenders or food processors to cut up their bark and they didn't have plastic bags to wrap it up in.

Unless you harvest fresh bark from a slippery elm, your bark is probably going to be dry, like the shredded bark that I bought. If you harvest the bark right off the tree, you'll need to peel off the inner bark, which is fairly easy to do, while it is still moist. All you will need to do is scrape it out. But if you allow it to dry, you'll need to use something like a wood carving gouge to remove it.

Dry bark will need to be shredded and ground, and it will need to be dry to grind it. The Indians would have used some sort of a stone grinding trough, or mortar and pestle for this. I don't have one of those, but given the time I spent in Mexico, I do have a molcajete.

With the bark dry and shredded or ground, it's time to make it slippery. Place a good handful of it in a bowl and add water. The bark will soak up the water and release mucilage, which is essentially a tree mucus. In case you were wondering, yes, it's slimy.

As an alternative to water, there were times when the Indians would use meat fat. But few of the animals they hunted for food had much fat on them, unlike our domesticated livestock.

It's impossible to apply the slimy bark to the meat alone and keep it there. Since they didn't have plastic zipper bags to use back then, they would probably use a piece of soft leather, perhaps buckskin, to wrap the meat in, allowing them to package it and make it portable.

In order to use this as a preservative, we need to coat the meat with it. So, start by laying out a piece of leather or suede and spreading a thin layer of the now slippery bark onto it, covering enough area for the entire piece of meat. It's hard to spread a layer that's thinner than about 3/8".

Either raw or partially smoked meat can be used with this method. The way smoking preserves meat is through a combination of soaking the meat in a salt brine, which will kill bacteria near the surface of the meat and then slow cooking the meat to a high enough internal temperature to kill bacteria inside the meat.

While that is happening, the collagen in the surface layers of the meat forms a skin, called "pellicle".

Place the meat on top of the slippery elm bark and then add more wet bark on top of the meat, being sure to cover it all.

It is important to ensure that the entire surface of the meat is covered by the wet slippery elm bark, including the edges. Any gaps left in the bark would allow bacteria to get to the meat, causing it to begin decomposing.

With the meat covered in this way, the leather can be wrapped around it, making a package. Start by folding the ends over and then roll the piece of leather, rolling the meat inside it. Tie it with a couple of leather thongs to keep the package from coming open.

When it is time to eat the meat, the package is unwrapped and the slippery elm bark is wiped off or washed off. There is no problem if it can't all be removed, as slippery elm bark can be ingested without any problem.

Some medicinal purposes for the bark require eating it, although nowadays that's usually done as powder in capsules to make it more palatable.

How Good Is This Type of Preservation?

While this method does preserve meat, it's not the kind of thing you'd want to use for meat that you're putting in your food stockpile. This preserving method was something that Indians used when they were traveling or moving from place to place and needed to be able to keep their meat usable for up to a couple of weeks. After that, it may not be so usable.

Nevertheless, this is a useful method to know of, for the same reasons the Indians used it. If you are in a situation where you are living off the land and kill a deer, you'll probably need to preserve the meat, at least on a short-term basis, until you eat it. This method would allow you to do that, as it can be used with large pieces of meat as well, as long as you have enough slippery elm bark and something to wrap the meat in.

How To Make Bark Bread

Modern bakers' yeast as we know it today did not exist until the late 1800s. Even when it became available, it was usually too expensive for most of the population, and that's why they preferred to make their own. Housewives and bakers used different types of wild yeast or massive amounts of eggs to leaven the bread.

Homemade yeast could be made through various ways, like using hops, potatoes, or a flour/water/sugar mixture. It could also be made from distillery barn yeast or a sourdough starter.

Unlike modern-day yeast, the homemade type made with sourdough starter takes a longer time to rise. It usually takes 12–18 hours during the summer and 18–24 hours during the winter.

Another difference between modern-day bread and traditional bread is that the former uses more additives, while the latter is as organic as it can get.

Our ancestors passed on heirloom varieties of wheat to us, the most common being a blend of organic spelt, einkorn, and barley. Aside from making their own bread, people from the early 1800s used to plant and harvest their own wheat.

The best time to plant winter wheat is during the fall to allow for six to eight weeks of growth before the soil freezes. This also ensures proper root development.

Planting the wheat too early makes it vulnerable to summertime insects and smothering during spring. If it is planted too late, the wheat will not overwinter well. On the other hand, spring wheat should be planted as early as the ground can be worked in spring. To grow quality wheat, here are the steps to follow:

Make sure to do the initial plowing in the fall. Till and sow in the spring. An evenly distributed crop is achieved when seeds are divided into two parts: one part planted from east to west and the other from north to south. It can also be planted in rows.

Cover the seeds by raking the soil over them. For best results, firm the bed to make good seed–soil contact. Through constant care and attention, your wheat will grow, and you'll notice that the stalks will turn from green to yellow to brown. Once the heads are heavy with grain that pulls the top toward the earth, that's when you should harvest.

To make sure that your wheat is ready for the kitchen, test out a few grains by eating them. If it's anything less than firm and crunchy, the wheat is not yet ready.

Once you've harvested your wheat, you can convert it into flour by grinding it using a hand-cranked grinder or wheat grinder. If you

don't have one of those, you can always go back to the most basic way of grinding wheat, which is to use stones or hand grinding.

It may take a lot of effort and time, but the advantage is that you can control what the texture of the resulting flour will be.

How to Make Sourdough Starter

Now that you have your flour, it's time to talk about the rising agent that was used for most homemade bread in the early 1800s: sourdough starter.

Ingredients:

- Jar or container, preferably with wide-mouthed openings
- Filtered or spring water
- Flour
- Cheesecloth to cover the jar.

Method 1

Pour ½ cup water and add ½ cup flour into your jar. Mix thoroughly until it feels like thick pancake batter. Cover the jar with cheesecloth.

Leave the mixture on your counter for 24 hours at most.

Feed the starter by giving it a ½ cup of flour and a ½ cup of water; it needs to reach the proper consistency. By now, the start should have a few bubbles.

Stir, and cover again. The next day, the starter should have more bubbles and the top should look almost foam-like. Feed it again like before, and repeat step six. Make sure to feed your starter every 24 hours. Once you notice that there is a constant rise of bubbles, it might be ready for baking.

How to Make Tasty Bread Like in 1869

Now that you have both the flour and the sourdough starter as the rising agent, you can go ahead and make a completely homemade bread. The most common recipe that our great-grandmothers based their delicious bread on is: "One coffee cup flour, two coffee cups Graham flour, one coffee cup warm water, one half coffee cup yeast, a little molasses, a teaspoon of salt, and half a teaspoon soda dissolved in the water.

Make as stiff as it can be stirred with a spoon. Let it rise overnight and bake about an hour in an oven at moderate heat. This quantity makes one loaf." This recipe is from Mrs. Winslow's Domestic Receipt Book from 1869. A more modern adaptation of the recipe is the following:

Ingredients:

- 2 cups flour
- 1 cup warm water
- ½ of the sourdough starter
- 2 Tbs. molasses (or whole cane sugar)
- 1 tsp. salt
- Optional: ½ tsp. baking soda.

Method 2

Mix flour and salt in a mixing bowl. Add sourdough starter, molasses, and warm water. Stir until the dough feels wet and sticky.

Optional: To remove the sour flavor in your loaf, add a ½ tsp. of baking soda, and mix it thoroughly.

Place the dough into a greased 9x5-inch bread pan. Cover with a damp dish cloth or tea towel, and with another dry towel over it, and let it rise for 12–24 hours.

Once it has risen, the dough should be light and fluffy. To make sure, press lightly on the dough. If it dents, it's ready. Bake at 350°F for about 40–45 minutes. If you don't have a timer, bake the bread until it is golden brown. Tap on the bread, and if it sounds hollow, it's ready for breakfast.

Making Bark Bread (Famine Bread)

Bark bread is a common form of survival food. Many people ask if tree inner bark is really edible, and the answer to that is yes, it is. It is actually a safe and nutritious wild food, as long as you're using the right part of the bark from the right species of tree. The edible part of the tree bark is the cambium layer, which lies right next to the tough inner wood.

Edible and safe bark can be harvested from multiple trees, the most common being pine trees. Slippery elm, black birch, yellow birch, red spruce, black spruce, balsam fir, and tamarack barks are also some of the trees with the specific bark you're going to look for.

The light inner bark of a pine tree is harvested in the spring when the bark is more easily removed from the tree trunk. Another reason why it's best to harvest in spring is because the vitamin content of the bark is highest then. Here's how you should harvest and prepare bark.

Positively identify the tree species. Take only narrow vertical portions of the bark from the tree. Shave off the gray, outer bark and the greenish middle layer of the bark to get down to the rubbery white or cream-colored inner layer. Be careful not to shave too deeply. See picture below. Cut and peel off the whitish, rubbery inner bark.

Dry the bark in the sun on a rack, on a flat rock, or just like in the image below. It should take a day to dry the bark strips, but that depends on the weather and the bark strip size.

You can eat the bark as soon as you've harvested it. You can also fry or boil it to make some bark snacks.

To make the bark into flour, you only need to dry it for a day and then pound it until it turns

to powder. You can use a stone for this or a mortar and mill. The result will look more like oatmeal than wheat flour.

You can add the bark flour when making your breakfast bread, just like our great-grandparents survived when they went through severe famines. Bark bread was also something that was actually part of their diet. Even during the wars in the 20th century, bark was used to add nutrition to their daily rations.

Ingredients:

- 100g or 2.5 oz. of yeast
- 1 quart of lukewarm water
- 1 quart of rye flour
- 1.5 quarts of white flour
- ½ cup of bark flour

Method 3

Mix all the ingredients in a bowl. Stir thoroughly. Set aside to rise for an hour. Knead the resulting dough from the mixture.

Allow to rise for 45 minutes to an hour. Roll out into smaller rounds. Before baking, sprinkle with water.

Baking time will vary depending on the size of the bread. For medium-sized bread the size of a pita bread, bake for 10 minutes at 425°F.

Alternatively, you can cook the bread over hot coals as long as you turn it constantly.

How To Make Homemade Bread In A Can

Usually, when someone thinks of bread in a can, they imagine the unnaturally spherical, molasses flavored, and oddly textured store-bought version.

Making bread in a can at home, however, yields a much different result: fresh, great tasting bread that's environmentally and economically friendly.

Bread making seems to be a lost art form – it's something so readily available in a grocery store and yet all it takes is just a few ingredients and a little bit of time to make it homemade.

Ingredients

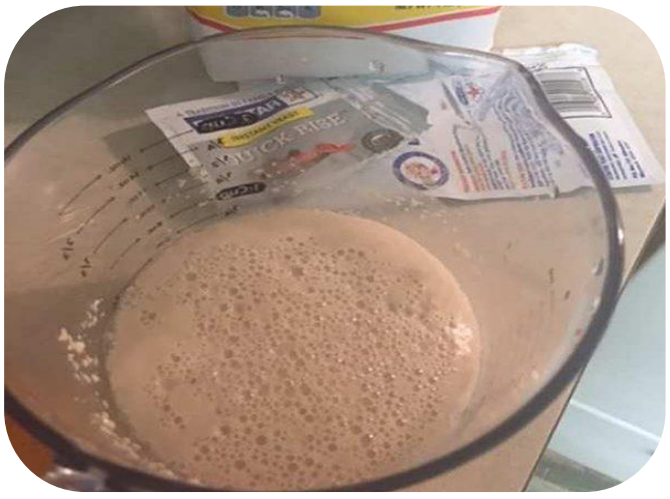
- One pack of yeast
- One teaspoon of sugar or honey
- 5 ½ cups of regular or whole wheat flour
- Two teaspoons of salt
- Two tablespoons of olive, canola, or vegetable oil
- Water.

Method:

First, begin by activating one packet of yeast in ¼ cup of warm water, about 110-130°F.

Add one teaspoon of sugar or honey, and mix well. Since yeast is a live microorganism, be sure not to use hot water or it will not survive.

Wait several minutes, until the top layer is foaming slightly.



Meanwhile, whisk or sift together 5 ½ cups of regular or whole wheat flour and two teaspoons of salt.

Add the yeast mixture, another cup of warm water, and two tablespoons of olive, canola, or vegetable oil.

Either with a spoon or a dough hook attachment on an electric mixer, gently mix until the dough just comes together.

If it appears too dry, more water can be added. Conversely, if it seems too wet, more flour can be added.

Next, sprinkle flour onto a flat surface and knead the dough by hand for ten minutes. To knead, simply fold the dough and press with the heel of the hand repeatedly.

Kneading is an important process that helps to develop the gluten proteins in bread, which is what gives bread its texture and elasticity.

It also helps to remove any air bubbles for even baking. Place the dough ball in a bowl and cover with plastic wrap.

Leave it out to proof at room temperature until it doubles in size, about one to two hours. Once risen, knead again for another two to three minutes, cover, and let rest for ten minutes.

Shape the dough to fill a lightly greased BPA free can—there will be enough dough for more than one loaf. Allow dough to proof for a second time, about twenty to thirty minutes.

When it has doubled in size again, preheat the oven to 450°F.

Brush the top with egg wash or water, then bake for twenty-five to thirty-five minutes.

Bread is finished when it has a golden-brown top and sounds hollow when tapped. Allow to cool before removing, then slice and enjoy!

So why go through the trouble of making bread at home? Apart from the fact that it tastes fresher, it may also save -you some money. The average price of bread is around $1-2.00 for a one-pound loaf.

The price of this recipe is somewhere around $0.50, depending on the ingredients you choose, and it has only six ingredients. A one-pound loaf of white bread can cost as little as $1.00, but may have double the number of ingredients. It does require a bit more time to make bread, but only about a half hour of the entire process requires active baking.

There are several benefits to baking bread in a can rather than a loaf pan as well. First off, it creates less of a crust—perfect for younger kids who seem to despise bread's crispy exterior (or picky adults!). A second benefit is the positive environmental impact that recycling cans has. About half of recyclable cans are thrown in the garbage, and thus, new materials are required to make more cans.

The process to make new metal for cans is a large contributor of greenhouse gasses and requires a large amount of energy.

This can easily be cut down by recycling old materials, which can be done an endless number of times. It may seem like a small thing to do, but repurposing cans can actually make a difference in the long run.

Saving money and the environment never tasted so good—making bread in a can is an easy and delicious way to achieve both!

How To Make Beef Jerky

Jerky is becoming increasingly popular in today's market. Several years ago, when people thought of jerky, the first thing that came to mind were the cheap packaged tubes of processed meat. They were fatty, salty, and low quality. Recently, jerky has been trending as a healthy food, and is slowly getting rid of its bad reputation. You can find jerky of all kinds now; exotic ones such as alligator or ostrich jerky, and even meatless types.

As with most healthy foods, beef jerky does not avoid the higher prices. Making it yourself keeps costs down without sacrificing quality. Also, despite popular belief that a dehydrator needs to be purchased, there is no need for fancy equipment—simply use an oven set at the lowest temperature and make delicious beef jerky without paying the store prices.

Method

The first step to making homemade jerky is to mix together a marinade.

There are many types of marinades that will work well, but this particular recipe is for honey teriyaki.

Whisk together a half cup of soy sauce, a heaping tablespoon of honey, a half teaspoon of garlic powder, and a teaspoon or more of hot sauce, depending on the level of spiciness desired. Unlike marinades used for grilling or baking, no oil is used—the additional fat makes it more difficult for the meat to dehydrate.

Next, choose a 1-2-pound lean steak—sirloin, top round, eye round, or London broil will all work well. There should not be too much excess fat on these cuts of meat, but if there is any still visible be sure to trim it off.

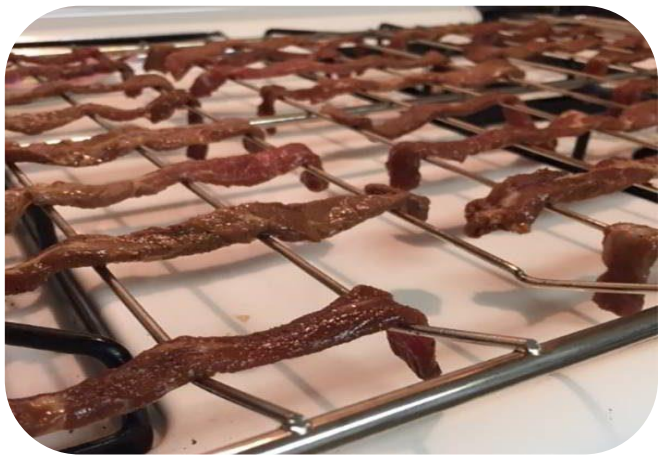
Then, slice against the grain (pictured) and make slices less than a quarter-inch thick.

Once all of the steak is sliced, place the marinade and the beef slices in a sealable plastic bag and refrigerate for at least one hour, up to overnight.

After the beef is done marinating, place on paper towels and dry off any excess moisture leftover. Discard any remaining marinade, then preheat the oven to the lowest possible temperature it can go.

Make sure it is at least above 140°F in order to kill off any potential bacterial growth.

Meanwhile, remove one of the wire racks from the oven or use a metal cooling rack. If concerned about the beef sticking, it can be very lightly oiled. Then, evenly space out the strips of marinated beef onto the wires.



When oven has heated, place the rack with the beef on one of the top spots. Then, place a baking sheet lined with foil on the rack below it to catch the drippings.

Keep the oven door open an inch or two in order to help with heat circulation. Be sure to use something wooden or metal—plastic will melt!

Allow beef to dehydrate anywhere from one to four hours, depending on the type of meat being used. Once beef has reached a dry and leathery texture, it is ready to be taken out of the oven, cooled, and kept at room temperature, then enjoyed!

The honey teriyaki recipe featured is one of the many possible flavors that can be made—simply choose any favorite marinade and omit the oil in order to make it into a jerky.

For a quick barbeque flavored jerky, simply marinade the meat in any barbeque sauce of choice.

Different types of protein can be used as well, including lean turkey breast. If feeling adventurous, venison or bison meat will also make great jerky.

In addition to being able to make different flavors that may not be found in a store, it's also possible to choose to make lower sodium options. For example, a low-sodium soy sauce may be used if salt intake is a concern.

Beef Jerky can be stored or taken anywhere very easily, making it a perfect snack to travel with. High in protein, beef jerky is a delicious way to maintain a healthy lifestyle. The best way to store it is in a vacuum sealed mylar bag, in a cool dark place like the pantry, away from the stove or other appliances and sunlight.

For even longer storage you can freeze your beef, turkey or pork jerky until ready to use. And because of its up to 6-month shelf-life, it can be a great survival food to add to your stockpile.

How To Make Potted Meat

The 872-day Siege of Leningrad was truly the deadliest and worst SHTF situation in a large city up until now. The disruption of food, water and energy created a great famine that killed 1,500,000 civilians and soldiers. It was Hitler's intention to starve Leningrad to death.

"Residents of Leningrad queueing up for water". Boris Kudoyarov / CC-BY-SA 3.0

One man amongst the 2 million trapped in the city, Boris Novakovic, watched in horror as rations depleted until there were none left, and the city began to crumble into starvation and chaos. However, Boris had lived through adverse times for much of his life.

In his community, Boris was often mocked behind his back because he haggled the local market owners and slowly built a stockpile of long-term food stores.

With his small pension, Boris was able to put cheap and plentiful food away for years before the Siege took place.

He was a prudent man in the bustling city filled with people who assumed they would never have to go through hard times.

The Siege cut Leningrad off from outside resources and in no time at all, food was so scarce that people were willing to do almost anything for it! Boxes of jewels, gold and even expensive fur coats were traded for meager scraps.

There were even rumors of cannibalism, none of which have been proven in the eyes of history. However, the children took to a pre-war nursery rhyme and changed the lyrics into eerie verses representing the desperation of Leningraders, and reflecting the rumors of cannibalism:

"A dystrophic walked along
With a dull look
In a basket he carried a corpse's arse.
I'm having human flesh for lunch,
This piece will do!
Ugh, hungry sorrow!
And for supper, clearly
I'll need a little baby.
I'll take the neighbours',
Steal him out of his cradle"

While the city was starving, our friend Boris was now being ridiculed in a different way. He became known as "Fat Boris", not because he was overweight, but because his stockpile kept him from becoming sickly and ill like the rest of the citizens. With the food he had been putting away, Boris was able to feed himself and even help others around him.

The story of Fat Boris is not unique. Throughout history and even in our own Great Depression there have been wise and prudent people. They put up food stores while these resources were cheap and accessible. These people often helped those around them, too.

The time to put up emergency food is NOW, before you need it. When disaster strikes it will be too late.

Putting up food and knowing how to preserve it is vital to any long-term food storage plan. Potting meat is one of the best ways to store meat for a long time to assure you have it when you need it most.

While it might seem complex, you too can make your own potted meat. Like Boris, you will be prepared for the worst-case scenarios.

Tools

The "pots" that would have been used were little more than earthenware or ceramic cups. Before the tin can this was how meat was potted.

Our modern twist on this recipe is the resourceful use of coffee cups as the pots. I figure we all have a few too many coffee cups.

- A Few Coffee Cups
- A Large Bowl
- A Sauce Pot
- A Muddler or Another Tool to Pulverize the Beef.

Ingredients for Potted Meat

- A Few Pounds of Beef
- Good Whole Butter
- Clarified Butter.

The Process of Making Potted Meat

Potting beef is very simple. Let's start with that. We are simply going to mash up the meat and beat in some more fat.

Then we are going to cover the entire thing with even more fat.

#1. Slow cook your beef, however you are comfortable until it is falling apart. You can use a Dutch oven for this if you don't know what you're doing. Once the meat is tender, you will want to shred it a bit and let it chill.

#2. After 8 or so hours your meat should be completely chilled, and you can start the process.

Place all the meat into the bowl and begin to mash it with your muddler or something else hard that will really macerate the meat. I guess you could use a food processor.

#3. Now you are going to add the butter, which needs to be an extra third of the total mixture and continue mixing this.

You really want to incorporate the butter.

Understanding the idea behind an extra third is very important because it gives you the ability to reproduce this recipe no matter how much beef you have.

For 2lbs of cooked beef, we will simply use another pound of butter. If you were doing 20lbs of beef you would apply a third of the fat and that would be 10lbs. This ratio makes this process very simple to scale.

#4. Now you are going to press your butter-meat mixture into your "pots", and leave about 2 inches until the top. This will ensure that you will have room to pour your butter.

#5. Place your pots on a sheet pan and warm them around 200 degrees just until they are warmed through. This will take about a half-hour.

#6. In your saucepot melt the clarified butter. When you pull the pots from the oven you can start ladling some warm clarified butter into the open space in your pots. Fill them up good. This seal does all the preserving.

I used about ½ cup of melted clarified butter.

#7. Now chill the pots completely and you have potted your first bit of beef.

If you can keep the clarified butter intact, you will be able to store these pots for months at a time. This requires storage in a cold, undisturbed environment.

There may be no better way to preserve your meat in the winter. These pots can be stored covered outside in an off-grid situation. You might even be able to get away with storing them in a root cellar.

Potted meat has come a long way since the 1700s. When you make this potted beef, you will see just how different and how delicious home potted meat can be.

It's much more than a cheap amalgamation of pork parts and chicken parts that are canned under pressure. You might also add herbs to this potted meat recipe.

Things like oregano and thyme are not only going to flavor your meat but they are also going to add some medicinal properties to your recipe.

There is no denying it, cooking from scratch can be a true lifesaver and one of the most important survival skills.

How To Make Delicious Lard With 2 Years Shelf-Life (+5 Tasty Recipes)

When the trees start to slowly lose their leaves and autumn settles in, it means it's that time of the year dedicated to making lard at home for the winter. It's an easy process that can be done by anyone, but I'd recommend you first learn these techniques.

So, I will show you how you can make your own lard, as well as 5 different ways of using it.

First, you will need some fat. I will be using 11 lbs. of pig fat and a little bit of chicken fat.

Place the fat on a cutting board and cut it into small cubes. After cutting it all up, grab a normal pot and add a cup of water, because this way the fat won't burn onto the pot.

Then add the cubes of fat. After placing everything inside, you can start melting the fat. The cooking should take about 2 hours.

When the fat cubes start to turn golden-brown and harden, take the pot off the fire. This is how it looked when it was finished, after the two-hour mark. (upper photo – next column)

At this point, you will be left with two things:

1. the melted fat
2. greaves (which are a byproduct of the melted fat).

Both can be served warm or cold, depending on your preferences.

Here are the chicken greaves, after separating them from the fat:

Using a potato masher, I was able to extract more fat from the greaves. Gently and slowly push the greaves down until most of the fat is being removed from the inside.

Do this while everything is still hot, this way you can remove the fat before it solidifies.

Now, remove the greaves from the potato masher. You can already see that they are way dryer than before.

After finishing up, I was left with 2.20 lbs. of greaves and just under a quart of lard.

1. Eat as They Are

The greaves can be eaten by themselves with some bread, salt, and onions.

2. Tasty Spreading

Or you can turn them into a spreading following this recipe:

- 1 lb. of greaves
- 0.20 oz. of garlic
- 0.50 oz. of onion
- 3 teaspoons of mustard
- 1 teaspoon of (regular) pepper paste
- 1 teaspoon of ground pepper
- 1 teaspoons of salt.

Using a meat grinder, you can create a paste that will surely fill your stomach. Of course, eat it with bread, onions, and salt. It's extremely tasty and satisfying.

3. Greaves Scones

You can also use the greaves for something more complex but twice as delicious. Greaves scones, which are great-tasting, salty scones, perfect to snack on while drinking a cold beer.

Ingredients:

- One cup of flour
- 5.50 oz. of grinded greaves
- 2 tbs. of yeast
- 2 tbs of butter
- 2 eggs
- 1.5 teaspoons of salt
- 1/2 cups of milk
- 1 tbs of sour cream and 1 teaspoon of sugar

Start by warming the milk on the stove, next add the sugar and the yeast. Mix everything else together (add the yolk of one egg only, the other egg and the rest of the egg white from the first egg will be spread on top of the scones) in a bowl, then add the milk to it.

Mix it all together and let the dough rise for an hour in a warm place. Make small circular scones, cutting a grid on top of them.

Mix the egg white left from the first egg together with the whole second egg and brush it on top of the scones.

Finally, place the scones into the oven, cooking them until they all turn golden-brown.

4. Lard on Bread

The lard we've previously collected will cool down slowly and solidify, changing to a white color.

Spreading this on bread is one of the great ways to use it. Eat it with onions, salt, and a little bit of pepper powder.

5. Pork in Lard for Long Term Storage

If you have a few slices of pork, you might be able to make something that is not only delicious to be eaten fresh but can also be put away to stay fresh for half a year.

First, grab some of the solidified lard we've made and place it in a skillet.

While the lard is getting hot, tenderize the slices and season it to your liking. After you are done, toss it in the skillet to fry. Cook it a little, until it starts to change color, then take it out of the skillet and do the same with the rest of the slices.

After all the slices are done, put it back onto the skillet and lower the temperature. Add more lard and a little bit of garlic, onion, peppers, and tomatoes (or place vegetables in using your own taste).

Cook the slices until the meat dries. The drier the meat, the longer its shelf life will be.

When you are finished with the meat, place it into a jar.

Add the lard you've fried the meat in for taste and to increase its shelf life.

Put it away in a cold area, be it a storage room or a fridge.

Canning Amish Poor Man's Steak

I have been eye-balling this Amish Poor Man's Steak recipe ever since I bought 80 pounds of ground beef a week or so ago. I ended up with 30 pounds of ground beef leftover, so I thought... Go for It!

Now this recipe has everything in it that the food police says not to can.

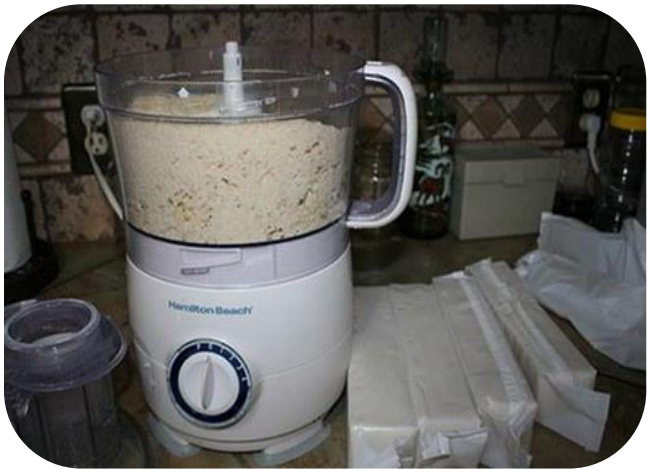
I did a lot of research on canning some things and have come to my own conclusion that this recipe is not going to kill me or my family.

I knew I did not own anything large enough to mix up all the ingredients so I went down to the Dollar General and bought a 35-quart Sterlite Container.

After a little soap, bleach and drying, I was ready.

I chopped 5 cups of celery and 5 cups of onions.

Crushed 6 tubes of saltines, meaning 1 1/2 pounds.



Cracked open and whisked 2 dozen eggs and measured 5 cups of milk.

All of these items were placed in my container as they were measured. Now I know what a chef in a restaurant feels like adding huge amounts of ingredients.

The recipe just reads…salt and pepper. Don't you just hate it when that happens? So I added salt and pepper. I don't exactly remember how I came up with the following equation, but it worked out pretty well at the time.

I figured the saltine crackers are salty and the condensed mushroom soup is going to be salty, so I added what I thought would be the right ingredients… Just in case you want to be as adventurous as me and try this recipe.

Celery, onions, saltines, eggs, milk, salt and pepper mixed together. Oh yeah…I'm really feeling like a chef.

Time to add the 30 pounds of ground beef.

Now I warn you… Run you a sink of warm/hot water near where you are working. When you start mixing and mixing and mixing all of these cold ingredients with your washed, cleaned and bare hands, you will want to plunge them into something very warm every few minutes.

My hands were burning because of the freezing-cold meat. At this point I was feeling sorry for the restaurant chefs who have to do this kind of work every day.

I didn't get a picture of the mixing itself, because by this point, my hands were too numb to hold the camera, but this is what everything looked like when I started making the steak patties.

I shoved all the ingredients to one side of the container and placed my patties on the other

side using waxed paper to separate the stacks and prevent them from sticking.

I used the wide mouth rim and lid again to form the patties. Using this method will ensure the patties will fit into the wide mouth canning jars.

I only have one broiling pan, but I have a lot, and I mean a lot of meat to cook, so I made another improvised one by using a large roasting pan with my cake racks over it.

The Amish recipe says to bake the patties on cookie sheets, but I want to drain as much fat from them as possible.

Between the broiling pan and the roasting pan, I was able to cook 27 patties at once.

I baked them in a preheated 375-degree oven for 35 minutes, and alternated the pans about halfway through the cooking time.

It took me a little over 4 hours to cook them all. As soon as a batch would finish baking, I would put them in a roasting pan, cover them with tinfoil, and place them in the refrigerator. In total, I filled up 2 huge pans.

While my last batch was baking (late Friday afternoon by this time), I started making the gravy.

I had strained off some of the fat from the broiler and roasting pan and set it aside to make the brown pan gravy.

Trust me.... set aside much more than this.

I put 1/2 cup of the strained fat into a skillet and heated it on medium heat until hot.

Next, I added 1/2 cup of plain flour. The secret to making a good gravy base is to stir, stir, stir, and not cook it too fast.

You can control this by repeatedly lifting your pan from the eye of the stove and setting it back on it. You want to brown the flour slowly without burning it.

I had already put 5 cans of the mushroom soup along with 5 cans of water in a pot to begin warming.

I think there were almost 2 quarts. Trust me again. The recipe doesn't say how much gravy to make but you are going to need to make a lot.

The next time I cook Poor Man's Steak, I will try to establish some good measurements. I had to make gravy 3 times during the canning stage, and even ended up using two more cans of soup besides what was written in the recipe.

I added some of the mushroom soup mixture to the browned flour. Be careful...it gets angry during this procedure.

Keep adding the soup and stirring, and things will calm down.

I then added my base from the skillet to the pot of mushroom soup, stirred it in well, and let it simmer while I reheated patties in the microwave.

I totally forgot to take a picture of filling the jars, but here's what you need to do: you put a patty in the jar, cover it with the gravy mixture, then add another patty and more gravy, and so on, until the ingredients are one inch from the top of the jar. I got 5 patties in a jar.

I only did one canner load Friday evening as it was getting late Sunday, I finished everything, however it took me all day. I pulled the last canner load out around 10:00 PM.

This recipe made 142 patties! I canned 28 one-quart jars, and the breakdown in cost is about $2.25 a jar. But the thing that puts a smile on my face is that we have 28 (27) more meals-in-a-jar added to our preps!

How To Make Mountaineer Tuna Stroganoff

Tuna stroganoff is a spin-off of the classic beef stroganoff, so to understand this dish you must first understand the origins of the classic. The story is that originally, a French chef working in Russia made this dish for a cooking contest in the late 1800's. He named the dish after his boss, Count Pavel Alexandrovich Stroganov.

The beef was cut into thin slices to make it easier for the count to chew it despite his worsening dental condition. Most of the story is true. In that time, the Russian upper class were very rich. They liked to employ French chefs in their homes, and even spoke and wrote in French as often as possible. The Stroganovs were part of the upper elite. It is more likely that the French chef Briere worked for the daughter of the count.

It is also possible that the chef just chose a prestigious name to attach to his dish. It is definitely a French-Russian fusion. Browning the meat to deglaze for a sauce is very French, while beef with sour cream is very Russian.

Beef Stroganoff quickly became popular in Russia and China. It was not immediately popular in the US, seeing as the first wave of immigrants were fairly poor.

When the wealthy started moving to the US, the dish made its way here. It became hugely popular worldwide after World War II, and many variations appeared. Some included tomato, Worcestershire, and cream of the mu--shroom soup.

Mountaineers Tuna Stroganoff is designed for those cooking in the wild and those gearing up for a trip into the wild.

Beef is replaced with canned tuna because it is easy to pack and already cooked. It has a long shelf life and still offers the nutrients needed for a long hike in the wilderness.

The key ingredients to any stroganoff are noodles, protein, and a sour cream-based sauce. Tuna provides the protein and essential oils needed for survival. The noodles provide carbohydrates.

The cream sauce provides protein, calcium, and fats. In addition, most people include onions, mushrooms, and other veggies for vitamins and minerals. It is a well-balanced meal that can be prepared quickly in the wild or in your cabin.

If you are cooking in the wilderness, your best bet may be to use a powdered mix for the sauce. You can just add water, cook the noodles, add the tuna, and stir it all together. This is not the most flavorful way to prepare the dish, but it can be done with just a fire and a pan.

On the other hand, you can use lots of fresh vegetables, fresh tuna, and lots of herbs and spices if you want to maximize the flavor. The version I am presenting here is somewhere in the middle. If I was living in a cabin in the woods, and needed a good meal before hunting elk the next morning, this is how I would prepare the dish.

It is fairly tuna-heavy, so if you want the dish to be more noodle-heavy you can cut the amount of tuna in half.

Ingredients

- 2 tbsp butter or oil
- ½ cup dried onions
- 1 small can of sliced mushrooms
- 1 cup sour cream
- 1 cup milk
- 2 cans tuna drained
- Seasoning to taste
- 2 cups pasta of your choice.

Method

Start by placing the noodles in a sauce pan partly filled with water, and setting it on the burner at high heat. I like to use egg noodles because they cook very quickly. Check the noodles periodically until they are firm but not hard. Then drain the water and let them sit.

Next, put the butter and the dried onions in a frying pan on medium heat to rehydrate the onions. Once the butter is completely melted, add the can of mushrooms.

Let the moisture incorporate and then cook the mushrooms.

Continue to cook your sauce down until the moisture is largely cooked out.

It will take roughly 15 to 20 minutes in total. The consistency should be slightly thicker than an alfredo sauce.

Keep in mind that, as opposed to beef stroganoff, the tuna will become part of your sauce. This will make the final product thicker.

Add spices to your taste. Salt and pepper are always a must. In addition, I like to add cilantro, paprika, crushed red pepper, mustard, and minced garlic. You can make this a dozen different ways.

Put your noodles on a plate and spoon your tuna-sauce on top. Remember that this is not a traditional beef stroganoff.

The gravy will not have that brown tint that you are used to. It will have more of a pink color from the tuna.

You may need to let it cool for a minute before eating.

How To Make And Smoke Kielbasa Sausages

Making your own sausages is always fun, and requires both your cooking and your prepper skills.

It takes a couple of hours to make and a couple of days to smoke, but trust me, the taste of your own homemade smoked sausage is the best feeling.

The fact that you know what's in it, and know that it doesn't contain chemicals with complicated names makes it taste even better.

Ingredients

- 2 pounds of pork, with 25% fat and 75% meat. I'd recommend pork scapula or pork leg.
- 2 teaspoons black pepper
- One small garlic
- Paprika, to taste
- Salt, to taste.
- (Optional) one teaspoon of cumin
- (Optional) one teaspoon of chili powder
- 5-6 ft. of pork intestine.

Method

First of all, you will need to work on the garlic. One to two hours before getting anything else ready, you need to crush the garlic and cut it into fine pieces; then place it into a cup of water.

If you don't like the taste of garlic, you only need to add the water and 1/3 of the garlic to the mixture later on.

After you've done that, grab the intestine and put it into some water, too; the water will help us clean it later.

They usually sell them frozen, so the water also helps to loosen it up.

Grinding the Meat and Adding the Spices

First, you will need to cut the meat into slices, then use an automatic or manual grinder on the large hole setting to grind the meat down.

After you are done with that, you need to add the black pepper, the paprika, the garlic or the water it's been sitting in, the salt, the cumin, and the chili powder (if you choose to add these).

Now that you have added the spices, you need to mix everything together. I recommend mixing with your hands as you will need to mix it thoroughly.

You need to mix it for at least 15 minutes in order to get all the spices dispersed throughout the mixture.

Trying Out the Sausage

After mixing, I would recommend tasting the sausage mix to make sure you obtain the taste you want. But frying the meat won't give you the real taste of smoked sausage.

To get that wonderful smoky taste, you need to grab some of the meat and place it in the middle of a sheet of paper. Any kind of paper will do, so just use up that old newspaper you have. Carefully wrap the paper around the meat tightly, and make sure it's sealed.

After wrapping the meat in paper, you need to wrap it into tinfoil the same way; the tin foil is to protect it from the fire.

Now that you are done with the tinfoil, you need to wrap it once again with paper. Place several sheets of paper under your wrapped sausages, to make sure all the paper wrapping will be burned.

The end result should look like this. Taste it and adjust the mixture based on your preferences. You can do this as many times as you want, as long as you don't eat the whole thing.

Actually Making the Sausages

Now that you're sure you like the taste, you can start getting things ready for the filling.

First of all, you will need to clean the pork intestine, so take it out of the water you left it in, and gently let some water run through it to clean the insides too.

Now you just need to get some sort of sausage filler. If you have one at home, that's perfect. If not, you can always improvise, using a bottle and a piece of wood. Just cut the bottle's bottom off and put the meat inside; then use a piece of wood or something similar to push the meat through.

Now that you have your sausage filler, you need to place the intestines onto it. Just find one of the openings and push it up. Leave a little bit hanging so it doesn't run out of the intestines.

Don't worry; you won't need to tie the end. The mixture is thick enough that it won't dribble out.

After you've got it on, you can start filling it up. Proceed slowly, and make sure the sausage

goes into a circle and doesn't bend anywhere. It can easily tear in this form.

You also need a sausage poker or something similar (like a needle); this is to make sure no air gets stuck inside. Every four to eight inches, poke a hole so any air can escape. If you do see an air pocket, make sure to pop it.

The finished product should look something like this.

Smoking the Sausage

Once you have finished making the sausage, you can put it into your storage room if you have one; if not, then just place it in a cool place for one day.

It will need to dry a little bit before you can hang it up.

After that's done, you can get the smokehouse ready for the sausages. I converted the attic of a 200-year-old house into a smokehouse. It originally didn't have a chimney, so all the smoke would go up to the attic. Why not use it to smoke the food?

After you have your smokehouse ready, you just need to hang up the sausage and wait for it to finish. It takes about three to five days if you smoke it all day long.

Make sure you don't use logs with resin on them, seeing as the resin produces a bitter smoke.

The best kinds of wood to use for smoking are oak, any fruit tree, and beech.

This is how my sausages ended up looking after the five days had passed. After this, I usually leave them to hang in my storage room for another week to dry out well.

If you let the sausage dry for longer (around two months), it will get a stronger, more concentrated flavor, and will taste fresh for up to a year.

You can eat it by itself, fry it, add it to soups, or use it however you like.

Try it for yourself. I promise you will love the end result.

The Native American Superfood That Saved American Colonists During The Winter Of 1621: Johnny Cakes

You might be thinking "What the heck are Johnny cakes?" Johnny cakes, which are also called jonikin, ashcakes, hoe cakes, cornpones, mush bread, corn cakes, Shawnee cakes, or journey cakes, are basically a flat bread that is made with corn instead of the more traditional wheat.

The simplest form of these cakes is made from corn meal, water, and whatever grease is handy to cook them in. Salt is a very welcome addition that helps make them more palatable and satisfying.

The name 'journey cakes' is a very appropriate name for these flat breads. They are called that because they were commonly taken on long journeys.

While there's no doubt that Johnny Cakes are at their absolute best when eaten fresh out of the skillet, steaming hot and tender, they're really not so bad as leftovers either.

They could be prepared at the beginning of a short journey and last several days in saddle bags, providing a quick and filling meal that could easily be eaten while in the saddle.

Travelers could pack the ingredients for the simplest version of Johnny Cakes very easily in their saddle bags and fry up a new batch while on the road.

Tisquantum teaching the Plymouth colonists to plant corn with fish

Johnny Cake History

Johnny Cakes were made by early Native Americans. Since they were very proficient at growing corn and storing it for later use, a big part of the diet of many tribes was made up of corn meal, or ground corn.

After the long journey to North America from Europe was made by the first settlers, who landed at Plymouth in 1620, the stores of wheat that the colonists brought along with them on the ships spoiled during the long, damp voyage across the ocean.

It's purported that Myles Standish, the leader of the Pilgrims, found a cache of corn that was left by the local Native Americans. The Pawtuxet Indians, a tribe who inhabited the area, saw that the Pilgrims were struggling with starvation. They taught the settlers how to grind the corn and turn it into food that would sustain them through the long winter of 1621.

Without the nourishment provided by the Johnny Cakes and other foods made from the native varieties of corn, the Pilgrims would have likely perished.

The most famous Native American to have assisted the Pilgrims during their early years in the colony was Tisquantum. Tisquantum, or Squanto, taught the settlers how to grow, grind, and prepare corn, and also helped explorers of the new world map the New England coast early on.

He traveled back to England with Captain John Weymouth in 1605, came back to North America in 1614, and lived in the Plymouth colony for the rest of his life.

The Johnny Cake is also famous for its role in the Civil War. While these cakes certainly didn't originate in the Civil War or even necessarily in the South, as is sometimes stated by reenactors, but they were commonly consumed by soldiers both in the North and the South.

About the Name

The origin of the name Johnny Cake is a contentious issue among historians. There are some who believe that the original name, Shawnee Cake, was simply slurred and therefore sounded like Johnny Cake. Others believe it evolved from a Native American word for corn cakes, janiken.

Here's what you'll need to make your very own Johnny Cakes at home:

Ingredients:

- 1 ⅓cup cornmeal, finely ground (Traditionally, you'd use white cornmeal, but yellow will work just as well.)
- 1 ¼ teaspoon kosher salt
- 1 cup water
- ½ cup whole milk
- Oil for greasing the pan. (Traditionally, bacon drippings or lard would be used, but you can use vegetable oil or olive oil with good results. You simply need an oil with a high smoke point so that it doesn't scorch.)

Materials:

- A small saucepan for boiling water or an electric kettle and a glass measuring cup
- A mixing bowl suitable for hot items
- A spoon for mixing
- A skillet (Cast iron is ideal, but any skillet you have at home will do the trick if you're making your Johnny Cakes on the stove top. If you'll be working over an open flame, cast iron is the way to go.)
- A spatula for flipping the cakes.

Method

Put the water on to boil. Stir the cornmeal and salt together in a heat-proof mixing bowl; leave an indentation in the middle of the mixture. Pour boiling water slowly and carefully into the bowl of cornmeal mixture.

Stir as you pour until all the water is mixed into the cornmeal and there are no lumps.

Add the milk, stirring well until it is fully incorporated into the batter. You should have a batter that resembles thin pancake batter.

It shouldn't look watery, and if it does, you can add a little flour to help thicken the mixture.

Liberally grease your skillet and place it on the stove on medium heat. Wait until grease is popping hot. Spoon batter into the hot, greased skillet and let the Johnny Cake cook until the edges begin to become visibly firm.

Use the spatula to flip the cake over and then smash it down flat. The cooked side should be golden brown and the cake should be similar in thickness to a crêpe.

Allow the other side to cook for a minute and then use the spatula to remove the fully cooked cake from the pan.

Serving Johnny Cakes

These pancake-like pastries are quite delicious, even in modern times, and they're quick and easy to throw together, too. They're also a very versatile dish.

You can serve them just like you would serve pancakes. Add butter and maple syrup for the perfect mix of salty and sweet.

You can also use fruit, honey, or even chocolate on them for a more dessert-like twist. Johnny Cakes can also be served in a savory style.

Use them as buns for breakfast sandwiches or an interesting twist on a ham & cheese sandwich.

They can be served as a side dish with pork chops or chicken and vegetables. You can also serve them alongside soup or chili just like you would with cornbread.

Basically, any time you'd serve cornbread, these are a viable alternative and they're much easier to eat since they stay together better than the baked version.

How To Make Hardtack Biscuits

Though it may have been fire that brought humans out of the darkness and into the light, just as powerful a factor of change was the advent of agriculture, which allowed us to build communities and stop running and killing for survival.

Buried in the heap of incredible technological advances that catapulted our race to the very moon itself lies an often-neglected staple. It was an invention without which sea exploration would have been nearly impossible. It was a food that fed soldiers at war for thousands of years. I'm talking about hardtacks.

Not familiar with the name? Well, it goes by many others as well. As a matter of fact, this staple of the seafaring peoples of old and pioneers alike has been called cabin bread, pilot bread, sea biscuit, sea bread, ship's biscuit, and, as previously mentioned, hardtack. The journey across the Atlantic was a harsh one, and required a food source that could last through the long journey. Hardtack offered a carbohydrate energy source that was completely void of moisture.

This dried mixture of flour and water was often baked as many as four times to ensure it could be stored for years, if need be, without spoiling. That said, the hardtacks were not bulletproof. There are stories of sailors opening barrels of hardtack only to find armies of beetles waiting inside, and their food reserves for the voyage squandered. But these incidents were very uncommon.

At Wentworth Museum in Pensacola, Florida, you can find a still-edible hardtack from the U.S. Civil War labeled 1862.

In Alaska, people still eat hardtacks and actually enjoy them!

Though the hardtack eaten in Alaska today does not come from the recipe we will be discussing here, it's still a very simple leavened version, with the addition of some fat as well.

Survival kits are required cargo on light aircraft flights in Alaska, and it seems these hardtacks are a favorite addition to these kits, so much so that they are available everywhere these flights land or take off.

Photo by Infogramation

During the Civil War, the South was strangled by a naval blockade that kept fresh wheat out of the hands of the Confederacy. In fact, in the early days of the war, the army was eating hardtacks from the Mexican American War, which had ended in 1848.

This astounding fact should prove to you the effectiveness of this food. It was not uncommon for a soldier's full meal to consist of one hardtack for breakfast, one hardtack for lunch, and one for dinner. Now consider the grueling hikes and hand-to-hand combat that the soldiers went through. These warriors of our past fought it out with little more than coffee and flour in their stomachs.

Though the Union army had more resources, their soldiers, too, had to depend on hardtacks. Of course, they were not eating biscuits from previous wars, but they were still rock hard.

To temper the hardtack's rough texture, they would often dip it into coffee, whiskey, or tea. This acted as a softener.

Some of the men would smash them with rifle butts and mix in river water to make a mush. If a frying pan was available, the mush could be cooked into a lumpy pancake. If not, it was dropped directly on campfire coals.

For dessert, hardtack was sometimes crumbled with brown sugar and hot water. If whiskey was available, that was added. The resulting dish was called a pudding, according to historian William Davis.

The best place to find real, authentic hardtacks being made is at the popular Civil War re-enactments. The men and women who participate in the historic battles often enjoy producing some of the foods of that time. These hardtacks produced by the enactors will be the most authentic you can find, except for the ones you make in your own kitchen.

Hardtacks are also gaining popularity among preppers and survivalists. The tough biscuit is prized for exactly the same reasons it was in the past. It goes without saying that if things go south, these biscuits will be around.

Though they may not be the most delicious option, they could keep you and your family fed in a bad situation. Thus, hardtacks are becoming part of an extensive inventory of long-term food storage.

The brilliant thing about hardtacks is that they are little more than water, flour, and salt. This is why they last an eternity.

The desire to add things for flavor and texture is alluring, but remember, the true purpose of this food is to last forever! Adding things like fats, which can go rancid, will shorten the lifespan of this food.

I will provide you with a basic recipe for making these biscuits. What's more important, however, is that you understand the basic ratio.

Many people think cooking is about recipes, but really, knowing a ratio is much better than knowing a recipe, because a ratio can be manipulated easily. The ratio for hardtacks is 3:1 flour to water. This can be 3 cups of flour to 1 cup of water or 3lbs. to 1lb. or 3 tons to 1 ton. Take this ratio and apply it any way you see fit.

Ingredients:

- 3 cups flour
- 1 cup water
- 2 teaspoons salt.

Materials:

- Cookie sheet or pizza stone ($9 ceramic planter bottom at the local home and garden store)

- Large mixing bowl
- Rolling pin
- Pizza cutter (optional)
- Fork
- Big nail.

Method

Preheat the oven to 350°F.

Add your flour to the large mixing bowl and stir it around a bit with your fork. Add the salt next, and make sure that it gets well integrated into the mix.

One of the best pieces of advice I can give you when making dough by hand (and if you're making hardtacks, leave the mixer in the cupboard) is to make a well.

Once all of your dry ingredients have blended together, create a hole in the center of the flour. Use your fork to push the flour up and around the edges of the bowl.

Pour your water into the well and begin to slowly incorporate the flour into the water.

With your fork, slowly knock the sides into the well, allowing the water to begin to thicken.

This technique with the well allows you to control how much flour you add into your mixture.

Once the mix gets stodgy and doughy, you can pour it out onto a floured table.

This mass will still be pretty sticky, and it will take some additional flour and elbow grease to make it smooth.

Begin to work the dough by poking at it with your fingertips and folding it over itself.

Add flour until it stops sticking to the table and your hands. The dough will become smooth and soft after just a couple of minutes.

Once your dough has come together, you can begin to round it out. You want smooth dough that won't stick to your rolling pin or whatever else you are going to use to shape your hardtack.

The picture below shows our dough ready for the next steps.

There are several ways you can manipulate your hardtacks into various shapes. I utilize the rolling pin and the pizza cutter. You could take it one step further and use a cookie cutter.

Just know that although they may be shaped like dinosaurs, these tough biscuits will not soon become a favorite around the house.

One method for shaping hardtacks is to use the rolling pin to form a large square. If you have trouble forming the square from your round ball of dough, simply use the pizza cutter to trim the edges. Make sure that your hardtacks are at least ½ inch thick. Remember that these things were actually dinner for the soldiers of the Revolution, Civil War, and maybe even the Roman Legions.

Use a common household nail to poke holes into the hard tack. This allows the center of your biscuit to dry out quicker and more thoroughly in the oven. For a decently-sized square hardtack, poke 16 holes straight through the dough.

Another method for shaping your hardtacks is to break your dough down into smaller portions. These portions will cook quicker and can be more easily shared with others, should the need arise.

From here, shape the portions into smaller circles. These will become your individual portions. Though smaller than the, square hardtacks obtained using the method featured

above, these ones will also need holes punched in them with the nail.

When you think about this ancient recipe and how it must have been prepared all those years ago, it's really hard to simply throw these things on a Teflon-coated cookie sheet and bake them like chocolate chip cookies.

Invest in a clay planter bottom at your local home and garden store.

These are an incredible tool for baking breads or making stellar pizza using a home oven. They cost about $9 and last a long time.

The clay is highly effective because it holds heat so well. Lay your hardtacks out, and give them enough space to bake evenly. Place them in the oven for 30 minutes.

This 30-minute cook time is merely the first of at least two bakes these hard biscuits will go through. This process, although time consuming, will ensure that there is no remaining moisture in your hardtacks.

Any moisture left in the biscuits becomes the greatest enemy of this process of shelf stability. Some old recipes call for three, or even four baking cycles in the oven. These biscuits must have been closer kin to bricks rather than food.

Once your first 30 minutes cycle is over, pull out the hardtacks and allow them to cool. The steam will come out of them, and they will get pretty hard, although they will not be hard or dry enough to store at this point.

After having cooled them for about 20 minutes, place them back in the oven. This time set your timer for one hour.

It will be this bake that thoroughly dries your biscuits and also begins to give them a pleasing bit of color. After the last hour of baking, turn your oven off.

DO NOT REMOVE THE HARDTACKS.

Instead, leave your pilot's biscuits in the turned-off oven. Let the heat slowly drop in the oven while your biscuits slowly dry even further. This is a great practice for really zapping any remaining moisture left inside.

At this point, you have created some decent shelf-stable hardtacks.

Now, unlike most foods you spend your time making from scratch, I can't say you will be delighted to try them. They are dry and hard. Those are basically the two features for your palate when it comes to hardtacks.

It won't get much better than that, and really, it shouldn't. Remember, if you decide to spice them up with butter or herbs, this will simply add ingredients that will drastically shorten

the shelf life of your hardtacks. Keep it simple, and they will last forever.

Also, when you read about just how hard these HARDtacks are, you must understand that there simply aren't words that do them justice. If you do decide to taste the fruits of your labor, I advise you to take some precautions. Make sure you are chewing with the best teeth you have. If you have any loose or filled teeth, they may very well come out or even shatter.

All jesting aside, this is an ancient food that has carried entire nations through tough times. If you follow the recipe above and store your hardtacks properly, there is no doubt these biscuits will do the same for you and your family if you ever live to see such times.

How To Make Three Sisters Soup

The Three Sisters Soup recipe was created by the Kanienkehaka - Iroquois tribe, in order to make excellent use of the protein rich crops they grew as a guild garden with the same name.

Legend has it that the Three Sisters Soup recipe stems from the Iroquois creation story.

The tribe members believed that Earth came into existence when “Sky Woman” peered down through a hole from the “upper world” and accidentally fell through what appeared to be an endless sea.

When the animals saw her coming, they grabbed dirt from the bottom of the sea and rapidly spread it onto the back of a gigantic sea turtle to create a safe landing spot. The Iroquois legend called what we know today as North America “Turtle Island”.

The Sky Woman was pregnant before she fell to Earth. After reaching Turtle Island she gave birth to a beautiful daughter. The “West Wind” impregnated the daughter after she grew into a young woman.

The daughter of the Sky Woman died during labor, but not until after giving birth to twin sons. After the Sky Woman buried her daughter in what the Native American legend refers to as the “new earth”, three sacred plants then grew from the spot - corn, squash, and beans.

The plants first provided sustenance for the daughter’s twin sons, and then later for all of the people on Earth. The Iroquois tribe members believed the three plants, referred to as the Three Sisters, ensured the survival of their people.

The Iroquois people lived mostly in the upstate New York, Ontario and Canada regions.

While Iroquois are typically referred to as a tribe, the name actually relates to a specific language an expansive group of indigenous people used for more than 4,000 years.

The people who spoke the Iroquois language actually encompassed a minimum of distinct tribes.

The Three Sisters Garden was then annually grown by the indigenous people who lived on Turtle Island.

The gardening style that produces the ingredients for the Three Sisters soup uses a polyculture cultivation method.

Polyculture involves growing more than one type of crop in the same plot, so as to garner not only the most out of their gardening space, but also offer benefic companionship attributes to the other plants.

Why Do Corn, Beans and Squash Complement Each Other?

- Beans produce a high level of nitrogen, and corn requires an abundance of nitrogen to create a bountiful harvest.
- Beans need something to climb up on as they grow, and the corn stalks create a sturdy natural trellis.
- The squash plants offer not only a thick natural weed cover, but also help provide both shade and moisture retention for the corn and bean plants.

Three Sisters Soup Nutrient Content

- Corn is full of energy producing carbohydrates.
- Beans bring an abundance of both fiber and protein to the table. These nutrients also help balance the release of sugar into the bloodstream and help the body feel fuller for a longer period of time.
- Squash is comprised of a substantial amount of vitamin A and fiber.

There are several variations of the Three Sisters Soup recipe. Exactly how it was prepared varied slightly by region. I have included my two favorite soup recipes below. While they all have corn, squash, and beans as base ingredients, the slight variations in secondary ingredients do change the flavor of the soups in a pleasing manner.

Three Sisters Soup Recipe#1

Preparation Time - 20 Minutes | **Cook Time** - 45 Minutes | **Yield**: 6 servings

Ingredients:

- 3/4 to 1 cup dried pinto or kidney beans that have been soaked overnight in 4 cups water
- 1 diced onion
- 1 acorn squash
- 1 cup of shaved corn on the cob
- Up to 2 tablespoons of olive oil or butter
- Up to 3 cloves of minced garlic
- 1 large diced carrot
- 3 to 4 cups of vegetable stock
- 1 diced celery rib
- Up to 2 tablespoons of thyme
- Salt and pepper to taste.

Method

Drain the soaked beans and then rinse them. Put the beans in a pot and cover them with water - water level should be one inch above the beans.

Bring the Pot to a Rolling Boil

Reduce the heat to a simmer for 45 minutes - or until the beans are tender to the touch. Do not allow the beans to simmer until they become mushy. Add a little more water to the pot during the simmering process, if necessary. As the beans are simmering, cut the squash in half - make sure to scoop out the seeds.

Bake the squash halves (cut side up) in the oven at 375 degrees.

Bake the squash for 45 minutes or until they become tender. Again, do not allow the Three Sisters Soup ingredient to become mushy. Heat the olive oil or butter in a saucepan. Mix in the salt and onions.

Sauté the mixture over medium heat for about 10 minutes - or until they are golden brown. Stir frequently to avoid scorching. Combine all of the ingredients in the bean pot and stir thoroughly.

Allow the Three Sisters Soup to cool down, and then...enjoy.

Three Sisters Soup Recipe #2

Preparation Time - 25 Minutes | **Cook Time** – 45 minutes | **Yield** - 6 to 8 Servings

Ingredients:

- 2 cups of hulled and cooked white corn
- 30 ounces of diced tomatoes - either fresh or canned
- 15 ounces of cooked fresh or canned pinto or kidney beans
- 2 cups of peeled and cubed squash
- 2 tablespoons of olive oil
- 32 ounces of vegetable stock
- 2 minced garlic cloves
- 1 cup of chopped onion
- 2 chopped celery stalks
- 1 teaspoon of cumin and 1 teaspoon of basil
- 1 cup of cubed parsnips
- ½ cup of diced carrots
- 1 pinch of salt and pepper, or to taste.

Method

Prepare the hulled corn in advance using your favourite method or the traditional Iroquois method. Warm the oil in a large pot over

medium heat for a few minutes. Stir in the garlic, celery, and onions. Sauté the ingredients over low heat for 10 minutes. Add the salt and pepper, cumin, and basil. Stir thoroughly to combine.

Stir in the parsnips, squash, tomatoes, and carrots. Simmer the mixture over low heat for another 10 minutes or until tender. Add in the corn and beans. Simmer over low heat for an additional 10 minutes. Pour in the vegetable broth and continue to simmer over low heat for 15 minutes. Turn off the burner and allow the Three Sisters Soup to cool until it is no longer too hot to eat or store. Enjoy!

The Three Sisters Soup can be canned in order to preserve it. However, soup is a low acid food and cannot be preserved using the water bath method. It must be pressure-canned. Only a pressure canner is able to reach a temperature that is high enough to destroy bacteria or spores in the soup's ingredients.

How To Make Tarhana Dough & Tarhana Soup

Tarhana soup is the oldest instant soup recipe known to mankind. Tarhana is a coarse dried food that is comprised of fermented milk, yogurt, and a mixture of fermented grains. It is a traditional soup recipe from the Middle East and southeastern Europe.

Typically, tarhana is made into a thick soup that slightly resembles a stew. The milk proteins in the soup keep for an extended period of time. The recipe is both low in moisture and acidic in nature.

Tarhana soup recipes vary slightly by region and are a staple traditional food in Turkey. In Greece, a paste with cracked wheat as a base ingredient is fermented with milk to make the soup. In Cyprus, where tarhana soup is considered a local specialty, the vegetables and yogurt in the recipe are fermented and then dried. Albanians mix butter, yogurt, and wheat to make the base of the soup before mixing in feta cheese and olive oil. In Armenia, eggs, starch, and wheat flour are combined to form a base for this ancient soup.

Tarhana Soup History

As legend has it, many centuries ago, a Turkish Sultan from Central Asia found himself as a guest in the home of poor peasants. This family had little food to offer to their unexpected and important visitor. The only available food that the peasant woman was able to quickly cook to feed the sultan was “dar hane”, or “poor house” soup. Somehow, the name of this same dish changed over time, and people began calling it tarhana.

The soup recipe spread beyond the homes of poor folks, into the Balkans, and then around Europe and throughout the rest of the Middle East. The process of making the tarhana for the soup is a bit laborious, and also requires patience. Traditionally, poor villagers made the soup at the end of summer, when they were harvesting the herbs and vegetables from their gardens.

Tarhana Soup Nutrients and Preparation Process

Tarhana soup boasts a pleasant, spicy yet sour, taste due to the lactic acid produced during the fermentation process.

The soup is a significant source of amino acids, vitamin B, organic acids, and a host of other minerals. For this reason, tarhana is now considered to be a probiotic food.

The pH level of the soup is raised from about 3.4 to 4.2 during the preparation process. The drying stage of the tarhana soup preparation process draws out the moisture in the soup ingredients, leaving them with only about 6 to 10 percent of their moisture.

This vastly reduces the possibility of spoiling, as well as of the growth of harmful bacteria during the time that the soup sits on a shelf, waiting to be consumed.

Tarhana is cooked until it becomes an extremely thick soup and then the milk/water and the vegetable stock are added.

In most recipes, the yogurt and flour are dried and crushed into a powder to prepare them for the cooking process.

Cubes of cheese are sometimes added into the tarhana soup near the end of the cooking process. The soup is traditionally served with thick bread chunks.

It takes only two or three tablespoons of the crumbled tarhana powder to make soup.

Tarhana Dough

Preparation time: 72 hours| **Cooking time:** 1 hour | **Yield:** 8 lbs.

Ingredients

- 2 lbs. onions (peeled and quartered)
- 2 lbs. tomatoes (quartered)
- 1 cup olive oil
- 1 tablespoon salt
- 5 cups yogurt
- 2.25 lbs. semolina
- 4 lbs. hard wheat flour.

Method

Place tomatoes and onions in a large pot. Cover with water and bring to a boil.

Reduce heat and simmer for 50-60 minutes or until the vegetables are tender.

Drain the water and cool the vegetables overnight. Puree the vegetables, in batches, in a food blender.

In a large mixing bowl, combine olive oil, salt, yogurt, semolina, and hard wheat flour.

Add the vegetable puree and start mixing until the dough comes together.

At this point, you can make tarhana in two ways: process small pieces of the dough in a food processor until it becomes coarse, and then spread over a large baking sheet to dry overnight, or thin down the dough and place on a clean kitchen towel to dry overnight.

Process the dried tarhana dough into small pebble-sized pieces.

Continue to dry overnight and store in a clean jar or cloth bags.

Tarhana Soup

Preparation time: 10 minutes + inactive time |**Cooking time:** 30 minutes | **Yield:** 4

Ingredients

- 2 tablespoons tarhana dough
- 3 cups vegetable stock

- 3 tablespoons tomato paste
- 2 tablespoons butter
- Red pepper flakes.

Method

Place tarhana dough in a bowl. Cover with lukewarm water and rehydrate for 2 hours, stirring occasionally.

Drain the tarhana. Melt the butter in a saucepot. Add tomato paste and tarhana. Stir to combine. Pour in vegetable stock.

Stir again and bring to a boil. Reduce heat and simmer for 30 minutes.

Serve warm, sprinkled with red pepper flakes.

If you used Bulgur wheat, the tarhana might not look as though it has been fully reconstituted. But, once the soup mixture is heated through, the coarse lumps will dissolve. In Turkey, minced meat is sometimes added to the soup near the end of the cooking process or serve it alongside the soup.

Because of its long shelf life in dried state, tarhana is a wonderful staple item for any survival food pantry.

Bean And Rice Survival Soup – Easy And Adaptable Recipe

I wanted to share this bean and rice survival soup recipe because it's an inexpensive and easy one to prepare, store, and make when you're ready to use it. Once it's in the jar and stored, you will only need water and heat in order to enjoy a hearty bowl of soup loaded with carbohydrates and proteins.

A great perk of this recipe is that it's highly adaptable. You don't like rice? Simply omit it. You like spicy food full of robust flavors? Just add your choice of seasonings to the jar. I will go into further detail a little later.

Another way to adapt this recipe is by adjusting the batch size. The first instructions I am about to share are for a large batch. This makes it appealing to preppers, because it makes about 270 meals for under $300. Based on a 2000-calorie per day recommendation, and assuming it's the only available edible item in sight, that's approximately 90 days' worth of meals for one person.

I'm also going to share a much smaller batch that can be made for around $10-15.

The cost will depend on what you add or omit, as well as on the cost of groceries in your area. I will be demonstrating how to prepare the smaller batch in the photos below.

First, the basic recipe for the large batch:

- 4 20-pound bags of white rice
- 22 1-pound bags of red kidney beans
- 22 1-pound bags of barley

- 22 1-pound bags of lentils
- 6 1-pound bags of green split peas
- 6 1-pound bags of chickpeas (Garbanzo beans)
- 30 pounds of dry bouillon (chicken, beef, or vegetable)
- Seasonings of choice (examples: garlic, salt, pepper, cumin, oregano, or other dried spices and herbs)

And, the smaller batch recipe:

- 2/3 cup kidney beans
- 2 cups barley
- 1 cup lentils
- 1/4 cup green split peas
- 1/4 cup chickpeas
- 1 1/2 cups rice
- Bouillon (chicken, beef, or vegetable)
- *Seasonings of your choice
- This all fits in 2 individual quart jars.

*The seasonings I chose (per quart jar) were 2 bouillon cubes, 1 teaspoon of salt, about 1 tab-

-lespoon of dried celery flakes, 1 teaspoon of tarragon, 1 teaspoon of black pepper, and 2 teaspoons of garlic powder.

For the record, this is a relatively bland batch of seasonings. If you like spices and bold flavors, add more according to your own tastes. Now that you have an idea about what goes into this soup, what is the best way to store it?

Prepping for Storage

The preparation step is the same for both batch sizes, and is as follows:

#1. Mix all the beans in a large container.

#2. Fill a mason jar just under halfway.

#3. Put 1-1.5 cups of rice in a baggie, then add the bag to the jar, leaving enough room to add a small bag of seasoning. The rice and the seasoning need to be separated because the beans have to cook much longer than the rice, and this will allow you to add the rice later, thus preventing the rice from becoming mushy.

#4. Place the seasonings and bouillon you chose into a little baggie.

Separating the spices also allows you to remove expired seasonings and replace them. To make an individual pot of soup from this recipe you will need the ingredients in the jar,

and at least 3 quarts of water. Then follow these easy directions:

#1. Pour the water into your pot and place on a heat source.

#2. Add the beans to the water.

#3. Empty your seasoning packet, a little at a time if you prefer to taste as you go.

#4. Cover and simmer on a low heat, until the beans are soft (about 1 to 1.5 hours).

#5. Then add the rice, and simmer for another 20 minutes, or until done.

The finished soup is fairly thick. If you prefer a more broth-like soup, add an additional quart of water in the beginning. But if you do so, I would add more seasonings as well.

Shelf Life of the Ingredients

Keep in mind the shelf life for all ingredients that you add, such as:

Dried beans – 10 years to indefinitely (depending who you believe)
White rice – 4-5 years, unless vacuum sealed (then about 10 years)
Spices – most ground, dried, or whole spices are good for 2-5 years.

So, as long as you separate the dried spices from the beans and rice, the above recipes should last a minimum of 2 years, depending on the spices you use. However, there is no need to toss the entire batch. After 2-5 years, just change out the seasonings and reset the expiration date.

If you do not want to store the batches in quart jars, you can also place the batches in quart or gallon sized baggies. However, critters can get through bags much easier than through glass jars. So make sure to store the bags of ingredients in an airtight storage bin.

Optional Additions to the Soup

If circumstances allow, you can always add fresh ingredients, such as meat or veggies. Personally, I like some good ham added to the bean soup.
But if you're in survival mode, that might not be an option. So, having more seasonings in the jar will allow for more flavor, and you might not even miss the meat.

And, even though you will have an abundance of bean and rice soup, altering the seasonings between the batches will give you a bit of variety, which would be especially nice if you ever are truly in a state of survival and don't have anything else to eat.

However, having these batches on hand is also great for temporary survival situations, such as a bad storm knocking your power out for a week or two. One jar, a pot, water, and a source of heat is all you need to eat inexpensively and healthily for a while.

How to Dry Can Beans and Rice for 20+ Years Shelf Life

Beans and rice, a significant staple in a prepper's pantry...or, it should be. And, if the 2020 pandemic has shown us anything, it's that we can never be too prepared for shortages of any kind.

Prepping or pandemic aside though, I just happen to love having beans and rice in the house. There are so many things you can do with them.

In addition to the many recipes you can use beans and rice in, there's my dog. Every once in a while, he needs to go on a very strict diet for his digestive system, and that includes mostly rice. Unfortunately, he hit one of those times in the last couple of weeks, and sure enough rice was the latest shortage in the stores in my area.

So in this recipe, I will be letting you know a very simple way to dry can rice and beans to last you for at least 20 years on the shelf. And as soon as the shortage is over, I will be doing a much larger batch than I currently am able to do for this demonstration and article.

Sure, you could store the beans and rice in plastic storage bins. But that won't prevent bugs and larvae from getting in eventually.

In fact, when you open the bags and boxes of beans and rice before dry canning, inspect them thoroughly.

This process will however kill off unseen bugs or larvae that you might miss.

Supplies for Dry Canning Beans and Rice

Not only is the process quite simple, but the supply list is quite short. Here is what you will need or want:

- Dry Beans – any type of dry beans, or a variety
- Rice – any type of rice will work
- Canning Jars and lids – whatever size you prefer
- Funnel – not necessary, but might make it easier
- Oven.

I need instant white rice for my dog, so that's what we typically purchase. But it could be long grain, brown, flavored, instant or long cook. It doesn't matter, any type can be dry canned.

For the beans, I love all beans, but I'm using pinto beans for this demonstration. I will also do this with black beans, and split peas in the future, because I use both quite often. You could also do some jars of mixed beans for bean soups.

It's also good to know, that both rice and beans can be purchased in bulk. So, if you want dozens of jars of each, no problem. Just know that if you are in an area similar to mine right now, you might have to wait until the shortages are over, before you can do large batches.

Step 1

Place the jars into a pot with about 1" of water and a splash of vinegar for a steam bath (about 15 minutes), to sterilize them. Let them steam for about 15 minutes, with the cover on the pot.

Step 2

Thoroughly dry the jars by first wiping them with a clean cloth, then placing them in the oven at 220° until they are thoroughly dry (about 30 minutes). Let the jars cool down completely before the next step.

Step 3

Fill the jars with the rice or beans, with about ¾ air space at the top. Make sure that the rice and beans are not wet or moist at all.

If there is any moisture, it will start to cook in the next step, which defeats the entire purpose of dry canning. It will also wipe out the main perk of all the work, because it will not result in a good shelf life.

Step 4

Place the jars (without lids) in the oven at 220° for about 60-90 minutes, depending on the size of the jars. The larger the jar, the longer the time.

You can place the lids in a small pan and then place the pan in the oven for the last 15 minutes, which will sterilize them, as well as heat them up for a good seal.

Step 5

Pull the jars out of the oven, one at a time if you have a large batch. Wipe the rim of the jar to make sure you don't have any debris on it, that could prevent an appropriate seal from taking hold.

Step 6

Tighten the lids securely, and place the jars aside. Wait for the popping to begin! The seals will start to pop, but if they have not popped (center of lid's dome pops down) then you don't have a seal. You should start the process again, if they have not sealed after 12 hours.

Now that the beans and rice have been dry canned, you can store the unopened jars for at least 20 years. Some people swear that they have had success for up to 30 years.

Other items you could dry can include the following: dry pasta, dry oats, dry flour, dry spices, baking soda, baking powder. You can even dry-can some baking mixes, as long as they don't contain any nuts, shortening, oils, or brown sugar.

How To Make The Ottoman Empire's Shelf-Stable Meat – Pastrima

Throughout history, mankind has been faced with the need to preserve food. Whether living in cold, temperate or hot climates, our ancestors all recognized the same basic fact… that the food they grew, gathered or hunted had to be preserved in some way; otherwise, various types of pests, some too small to see, would devour their food.

This was and still is especially true for meats, which are probably the hardest category of food to preserve due to their high content in bacteria.

The difficulty in preserving meat has led to a wide variety of answers, from the salt fish of the far north to the jerky of the American Indians.

Most of these methods included salt in some form; probably because salt is nature's preservative. Pastrima, one of the Ottoman Empire's survival foods, uses salt as well.

My family loves to try these ancient recipes. One thing we've noticed is that foods which come from hotter climates tend to be more thoroughly spiced than foods that come from colder climates.

You'll see this with the pastrima, which is extremely seasoned. In fact, I'd say that it's so well-seasoned that your first reaction to it may very well be to say that you can't stand it. But by the second bite, you'll probably fall in love with it.

An added benefit to all those spices is that their aroma tends to chase off insects and rodents.

How Does Salt Work as a Preservative?

Salt is used in most methods of preserving food because it is a natural preservative. The way it preserves food is based on a scientific principle called "osmosis". Basically, this principle states that water (or any other solvent) will pass through a semi-permeable membrane from a less concentrated solution to a more concentrated one, with the purpose of equalizing the concentration.

In practical terms, all foods are made of cells, whose outer "skin" is a semi-permeable membrane. Meats and fruits have a lot of water in them, while grains and vegetables have less.

When salt is placed on these foods which have a high-water content, it tends to draw the water out of the food, helping to dry the food out.

At the same time, some of the salt molecules are absorbed through the semi-permeable

membrane that covers the cells, increasing the salinity of the food.

Since preserving food is primarily about protecting it from bacteria, and bacteria are single-cell organisms that need a wet environment to survive, drawing water out of the food creates an inhospitable environment for the bacteria. Not only does the salt draw moisture out of the food, but the bacteria as well. Once enough water is drawn out of the bacteria, it dies.

The salt concentration which stays in the food creates and maintains an unhealthy environment for any bacteria that might come along. So, not only does it kill the bacteria that is currently in the meat, but it also kills any bacteria that might come into contact with the meat in the future.

Making Pastrima

Pastrima, our Ottoman Empire survival food, is a cured meat. In case you didn't know, pretty much all of the meats you find in the grocery store delicatessen, other than ham and roast beef (but especially the various sorts of salami) are cured meats.

This means that the meat has been treated with salt and other chemicals (usually nitrates and nitrites) to kill bacteria and make the environment inhospitable.

At the same time, the curing process modifies the meat, breaking it down and making it more tender. This allows the use of relatively poor cuts of meat to make foods that we consider to be a delicacy.

However, I'm not starting out with a poor cut of meat, as the butcher shop doesn't usually have those out on display, I'm starting out with a thick-cut sirloin steak. I selected sirloin because I wanted a cut of meat which is relatively fat free. Although some cured meats require fats, Pastrima doesn't. You want lean beef for it.

As much of the fat from the meat as possible should be trimmed off. As you can see in the photo above, there is no surface fat on the meat, even though there is some marbling.

Ideally, we'd want a piece without any marbling, but this will work just fine. I've got roughly 1.7 pounds of meat here.

Salt the Meat

Since this is a cured meat product, it makes sense to start out with salt, right? We want to salt the meat down good... I mean really good. If you've ever made salt fish, then you know what I mean.

Start out with a layer of salt and place the meat on it. Then cover the meat with salt, making sure to get it crusted on all sides.

I used Kosher salt, as you can see in the picture. The reason for that was that the granules are larger, which makes it easier to crust the salt onto the meat.

You could also use sea salt, since it usually comes in larger granules, but the Kosher salt is cheaper.

Place the salted meat in the refrigerator for about three days, turning it over daily. When you turn it over, ensure that the exposed side is covered with salt, even if you have to add extra salt.

After the three days are up, a considerable amount of the water should have been extracted, and the meat should be sitting on the bottom of the Tupperware, as you can see in the photo below.

The reason why salt is not all dissolved in that water is that there is too much salt, and it can't dissolve.

Rinse and Dry the Meat

At this point, the piece of meat will actually be hard, because it doesn't have as much water content.

As strange as it may seem, you can hit it against the side of the bowl and it will feel like you're using a really well-done piece of meat rather than a raw one.

We're done with the salt now, so we're going to rinse it off of the meat; first under the sink faucet, and then by letting it sit in a pan filled with water for about an hour.

Dry, Wrap & Hang the Meat

While the meat has dried considerably, we want it to be as dry as possible. For starters, wrap the meat in a towel and put some weight on to press out any water.

I've used bricks as weight, as you can see in my pictures below.

Leave the meat wrapped and weighted down like this for about an hour to press out any ready moisture.

Then unwrap it and wrap it in cheesecloth.

Ideally, you want to use a meat hook to hang it. You can put the meat hook through the meat at this point.

I didn't have a meat hook, so I used a standard S-hook that I bought at the hardware store.

Since it didn't have a sharp point to push through the meat, I tied string around the wrapped meat and put the hook through that string to hang it.

As you can see from the photo, my refrigerator has glass shelves, which made it a bit difficult to find a place to hang the meat.

Ideally, you want it hanging somewhere where air can get to all sides of the meat, so as to dry it evenly. I ended up having to turn my meat every few days during the two-week drying process, so as to ensure that it dried evenly.

After removing the meat from the cheesecloth once this drying process is finished, it won't feel like a particularly well-done piece of meat. When you hit the side of the bowl with it, it will feel like a piece of wood. That's what you want.

Prepare the Spice Mix

What makes Pastrima unique, besides the drying process, are the spices with which it is covered.

You'll need:

- 1 tablespoon salt
- 3 tablespoons fenugreek*
- 3 tablespoons paprika
- 1 tablespoon black pepper
- 1 heaped tablespoon garlic powder

- ½ teaspoon cayenne pepper
- 1 tablespoon allspice and 1 tablespoon cumin
- Water.

* Fenugreek is not readily available as a spice in the United States. However, it is available as a dietary supplement, ground and stuffed into capsules. It takes about a half bottle of these capsules, emptied out, to come up with three tablespoons of fenugreek.

Mix all the spices together in a bowl until they reach a uniform color.

I found that using a whisk for this step worked well. Once the dry ingredients are mixed, add water a little at a time, until you reach the right consistency (like that of pancake batter). I ended up using ¾ cup of water, but you might need slightly more or slightly less than this. Make sure you mix thoroughly, scraping the bowl so that there are no pockets or lumps of spices that remain dry.

Coat & Hang the Meat

The spice mixture needs to be spread on the meat, coating it. I suppose you could do this with a basting brush or a butter knife, but I found it easier to do it with my hands, as the meat's surface is irregular and the spice mixture is thick.

You want to end up with an even layer of spices all over the meat, about 1/8 inch thick.

Once the meat is coated, it is ready for the final drying. But if you want a more "professional" looking result, you'll want to smooth out the surface of the spice mixture.

The easiest way to do that is to clean the spice mixture off of your hands and then lightly rub the surface of the meat with a wet hand. The water will keep the spices from sticking to your hand.

This now needs to be hung in the refrigerator again and allowed to dry. I had a bit of a problem with this step, as I hadn't used a meat hook and don't have wire shelves in my refrigerator.

So, I ended up making a hole in the meat to use my S-hook. Then I hung it from a wood dowel rod suspended over a plastic pitcher.

So, I ended up making a hole in the meat to use my S-hook. Then I hung it from a wood dowel rod suspended over a plastic pitcher.

The pitcher protected the drying meat from contact with other items in the fridge.

The Finished Product

The Pastrima will need to hang in the refrigerator for about another three weeks, until the spice coating has dried. This will give the spices enough time to soak into the meat as well, infusing its flavor into the finished product.

Slice the finished Pastrima into thin slices when you are ready to use it. As a survival food, you don't want to slice it beforehand, since the spice coating helps protect it. When I sliced it, I made my slices about 1/8" thick, because I was slicing it with a knife. But it would actually be better to slice it with a meat slicer, allowing you to cut it even thinner. Of course, this is mostly a matter of personal preference.

The Pastrima should look a lot like what you see above, with three distinct bands of color. On the outside, the reddish band is the spice coating. Then there's a purplish band, which is the depth that the spices soak in to. finally, there is the pinkish center, which is just meat, with little of the spices flavoring it.

Speaking of flavor, the Pastrima's flavor is rather strong, especially the first time you taste it. People who are not accustomed to eating spicy or hot foods may be a little put off by it at first, but it doesn't take long for the flavor to grow on you.

Frumenty: The Food That Saved Europe During The Dark Ages

If you've heard of the British Michelin-star chef Heston Blumenthal, then you'll probably associate him with his outlandish haute cuisine creations such as bacon and eggs ice cream and meat fruit (no, really).

When he put a dish called frumenty on the Christmas menu of his restaurant "Dinner in London", one could have easily supposed that it was a futuristic concoction of foamed pig's trotters or something.

'The Forme of Cury'

But frumenty is the polar opposite of a new-fangled meal. It's actually a medieval dish that was first prepared by a master cook in the court of Richard II, somewhere around the year 1390.

The recipe appears in the 600-year old document, 'The Forme of Cury,' one of the oldest known English language cookery manuscripts in existence. So yes, frumenty has quite a history. Its name is derived from frumentum (Latin for corn). But what is it?

In simple terms, frumenty is a thick, wheat porridge cooked in milk, ale or stock/broth. It can be served for breakfast, either plain or enriched with egg yolks, spices, sugar and dried fruit, and also as a side dish to accompany meat.

> "*The yule candle is lighted, and a supper is served, of which one dish, from the lordly mansion to the humblest shed, is invariably furmety (various spelling).*"
>
> On Yorkshire village life at Christmas. Telescope (1822, p. 298)

Frumenty Throughout History

Frumenty is a culinary leveler that has roots on both sides of the Atlantic. It has nourished Kings, children in Victorian workhouses and even the Confederate General Richard S. Ewell who, being no stranger to the odd eccentricity, ate frumenty for almost every meal.

Ready to try this tasty and versatile dish? Seriously, it's worth trying frumenty, because at this point, it's probably fair to assume that it's an enduring dish.

Try Making Frumenty

We've loosely based this recipe on the one found in 'The Accomplished Cook", by Robert

May, 1660.

Ingredients:

- 2 – 3 oz wheat berries per person, wrapped in a cloth and pounded with a rolling pin/something similar, in order to lightly crack the wheat.
- Liquid to cover the wheat berries – water, milk, broth etc.
- Beaten egg yolk, one per person – to serve
- Cream and sugar to serve.

Method

Rinse the pounded wheat berries placing them in a bowl of water, letting them sit for a few minutes, then draining the water. Repeat this step several times. Then soak them in water overnight.

Bring the wheat and liquid (milk, water or broth/stock) to a boil in a large pan, adding liquid until there is one inch of liquid above the wheat.

Reduce to a gentle simmer until the wheat is tender, adding more liquid if necessary (this is likely, so have some on hand).

Once the wheat berries are tender and the mixture has thickened, season with spices such as mace, cinnamon, saffron and salt.

Stir in beaten yolks and cream and sugar, if using, and serve.

Baked Frumenty

It's possible to bake frumenty in the oven – combine the cracked, soaked wheat berries with the liquid in a baking dish with a lid, or cover with aluminum foil and bake at 350°F until the wheat is tender (about two - three hours). Frumenty will keep pretty well in a refrigerator for up to 5 days, although the wheatberries might lose some texture, and a little water might be needed to loosen things up again before eating.

This is a dish to make your own taste. orange zest, honey and juice-soaked raisins work well, as do chopped dates and any number of other spice/fruit combinations. Experiment with the different ways you can enjoy this authentically timeless dish.

How To Make Peanut Butter Powder

Maybe you've seen it on the grocery store shelves and wondered about it, or maybe you've never even heard of it. I'm talking about peanut butter powder. For the amount of nutritional value in each serving, peanut butter powder can seem pretty expensive. Maybe you've been leery to try it for that reason.

I've got good news: you can actually make peanut butter powder at home. It's very simple. It doesn't require any super-special tools, and it doesn't take much time at all.

The Science Behind Peanut Butter Powder

Peanut butter powder was developed as a part of the molecular gastronomy movement. Molecular gastronomy combines food science and chemistry to present foods in exciting new ways. Using principles of molecular gastronomy, you can turn fats into powders, and peanut butter, though not strictly just fat, contains enough fat to qualify.

To turn any fat into a powder, you simply add tapioca maltodextrin, mix it up, and voila! You've got a powdered fat.

What You'll Need to Make Peanut Butter Powder

As I said, you don't need any uncommon or unique items to make this interesting convenience food.

Tools

You just need a blender or a food processor to mix the ingredients together and something to store your finished product in. It's that basic!

Ingredients

You'll need tapioca starch, which is also sometimes called tapioca flour. You can find it in the baking aisle at your local grocery store, in health food stores, or online. Tapioca starch is made from the roots of the cassava plant.

It's used frequently in Asian foods, more specifically Thai food. Note: Tapioca flour can be a real mess, so be careful! It's very fine and the powder will go EVERYWHERE if you're not careful with the blender.

You'll also need the peanut butter of your choice. Smooth works best for creating a fine powder since the peanuts are already ground smooth. You can substitute pretty much any nut butter that you'd like to turn to powder. Almond or cashew butter would make perfectly delightful nut butter powders.

Method

Put ½ cup of tapioca starch and 1/3 cup of nut butter into a blender. Put the lid on and turn on the blender to medium. Stop the blender to stir the mixture occasionally.

Continue blending for a couple minutes or until the mixture is totally incorporated.

You'll know that it's done when you've got a dry, crumbly powder. It will be lighter in color than your initial nut butter.

Storing Your Homemade Peanut Butter Powder

You need to store your peanut butter powder in an airtight container. A mason jar, a well-sealed plastic bag, or even a clean reused jar will work just fine. It's shelf-stable, meaning you don't need to store it in the fridge.

Your peanut butter powder will keep for as long as the peanut butter you used to make it is good. Ideally, you'll check the expiration date on the peanut butter and copy it onto the powdered peanut butter container you're using.

Peanut butter powder is a great way to add variety to your food storage. However, because it keeps just like regular peanut butter and other nut butters, it's not necessarily a space saving solution or a way to extend the shelf life of your stored food. If you're planning on storing your peanut butter powder, it's very important that you take extra care to avoid contamination while packaging it for storage,

just like you would with any other food. Be sure your containers and utensils are sterilized, your hands are clean, and take special care to prevent contaminants from entering into the powder.

How to Use Peanut Butter Powder

A lot of people aren't really sure what they'd do with powdered peanut butter once they made (or bought) it. Although it seems like kind of a novelty food, there are lots of practical ways to use peanut butter powder.

You can use peanut butter powder in any dish where the peanut butter flavor would be desirable. Here are some ideas for using peanut butter powder:

- Smoothies
- Crumbly, crunchy peanut butter cookies made from scratch
- Peanut butter flavored homemade oatmeal packets
- Popcorn topping
- Mixed into yogurt to make a fruit dip
- Additive in baby food for parents wanting to expose their baby to nuts (Ask your pediatrician if this is advised for your child.)
- Making fluffier peanut butter frosting
- Mixed into all sorts of baked goods recipes to add a pop of protein and peanut butter flavor
- Popsicle, frozen yogurt, and ice cream additive.

Why Use Powdered Peanut Butter?

Is there any situation where powdered peanut butter might be better than regular peanut butter? You bet!

Firstly, if you're trying to cut down on calories, powdered peanut butter contains fewer calories per serving than regular peanut butter. That makes this item an ideal solution if you're on a diet but you're a sucker for the taste of peanut butter. As far as nutritional value goes, it's a pretty healthy food when it's part of an appropriately balanced diet. It's also likely to fill you up with fewer calories than regular peanut butter.

This preparation of peanut butter is frequently used in the ketogenic diet, because it has a higher fat content and fewer carbs than most flours.

Next, it's great in recipes where the peanut butter flavor is desired, but the extra moisture and greasiness of peanut butter is not. For instance, you can make light, crumbly peanut butter cookies that you couldn't normally achieve with peanut butter.

Powdered peanut butter is very versatile, as well. You can 'reconstitute' it, returning it to a creamy state, by stirring in water. It mixes into foods easier than actual peanut butter, allowing for quick and seamless blending without the gloppy texture regular peanut butter can give.

Bonus: Peanut Butter-Chocolate-Banana Smoothie Recipe

Smoothies are a great way to use peanut butter powder. It's kind of like adding protein powder but without the unappealing flavor or texture

that some protein powders have. Blend together the following ingredients until smooth:

- 2 sliced frozen bananas
- 2 tablespoons dark chocolate chips
- 2 tablespoons powdered peanut butter
- 1/3 cup plain yogurt or vanilla yogurt (use vanilla for a sweeter smoothie, plain for a slightly less sugary version)
- ½ cup almond milk of your choice.

The Final Word on Peanut Butter Powder

Powdered peanut butter is easy to make, easy to use, and tastes delicious (assuming you like peanut butter).

Try it for yourself and don't be afraid to substitute other powdered ingredients for peanut butter powder in your favorite recipes.

How To Make Bully Beef, The Emergency Survival Food From WW1

Bully Beef was a staple of the British Army in World War I. Many consider it to be the same as SPAM, but it is not. SPAM is a pork product, while Bully Beef is canned, pickled beef. Today we are more likely to know this as Corned Beef.

The only difference between most canned corned beef and Bully Beef is the addition of gelatin. Not all canned corned beef uses gelatin in the canning process. They might use brine or clean water instead. Bully Beef always uses gelatin.

What made Bully Beef such a great survival food was the combination of curing the meet and canning it. Cured meats are meats which have been preserved by the addition of salt, nitrates, and nitrites.

Basically, all of the meats you find in the deli of your local supermarket are cured meats. The cured corned beef is then further preserved by canning, thus ensuring that no bacteria can get to it to spoil it.

As with any other canned food, Bully Beef will keep virtually forever, as long as the integrity of the can is not compromised. I have heard reports of canned foods which were opened after as long as 80 years of storage, and their content was still perfectly fine, although the taste did suffer somewhat from being stored for so much time.

As such, Bully Beef is an ideal survival food to add to our stockpiles. You can either buy canned corned beef, which doesn't always have the best taste, buy actual bully beef, or make

your own. In this chapter, I'm going to show you how to make your own.

The Preparation Process

You could start out by buying corned beef in the meat department of your local supermarket, but I've decided to make my own. Typically, the corned beef that I buy at my local grocery store is very fatty. For Bully Beef, you want lean meat. That's why I decided to make my own.

Corned beef is normally made from brisket, which explains why it is so fatty. I've also seen it made using round roast. I was tempted to do that, so as to start out with a leaner piece of meat, but in the interest of accuracy, I decided to go with brisket. I found the leanest brisket I available and then trimmed as much fat off of it as possible. As you can see from the photo below, there was a lot of trimming to do.

Trimmed brisket; most of the fat on the left came from a layer on one side of the brisket.

This left me with about three pounds of good, lean meat, ready for the pickling process. Now all I need is the pickling part.

For this step you'll need "pickling spices" plus a few other things. Rather than buying pre-packaged pickling spices, I made my own, this being a do-it-yourself project, after all.

Making the "Pickling Spices"

You will need:

- 2 tablespoons unground mustard seed
- 1 tablespoons ground allspice
- 2 teaspoons ground coriander seed
- ¼ teaspoon ground cloves
- 1 teaspoon ground ginger
- 1 teaspoon crushed red pepper flakes
- 1 Bay leaf, crumbled (1/4 teaspoon)
- ½ teaspoon ground cinnamon

Mix all ingredients together thoroughly, without adding any liquid.

Making the Corned Beef

You will need:

- 4 lbs. lean beef brisket
- 1-gallon purified water
- The pickling spices mentioned above
- 1 ½ cups kosher salt
- 4 teaspoons curing salt (Curing salt contains

nitrates and nitrites, which other salts don't have.)

• ½ cup packed brown sugar.

Take a large stockpot and combine the water with all the other ingredients except for the beef brisket. You are making a super-saturated solution, so you will need to bring the temperature of the water to a simmering boil so that it will absorb all the salt and sugar. Stir until everything is dissolved.

Pickling solution simmering on the stove

Once the salt and sugar are fully dissolved in the water, remove the pot from the heat and allow to cool to room temperature. Then put the pot into the refrigerator, allowing the liquid to chill even further. You do not want to pickle your beef in hot or even warm water, as that will begin to cook it.

Pour a small amount of the pickling solution into a plastic container which is larger than the piece of meat that you are going to pickle. It is important that the meat be free to float within the liquid and not be pressed up against the sides or bottom of the container.

If a part of the meat is pressed up against the container, that part cannot absorb any of the pickling solution.

Place the trimmed brisket in the container and then cover it with the pickling solution. Cover the container and place it in the refrigerator to cure.

Brisket pickling away in the pickling solution

If you don't have a large enough plastic container, you can use plastic oven bags, nesting one inside of the other, so that the outer bag can capture anything that might leak out of the inner bag. Be sure to close the necks of the bags tightly, so as to prevent the pickling solution from spilling out.

The curing process takes 10 days. Turn the meat every couple of days to ensure that parts of the meat which are above the surface get a chance to pickle as well. The meat in the photo above is floating in the solution, so it was necessary to turn it every couple of days.

Canning the Bully Beef

Your finished corned beef should come out of the pickling solution looking something like this. You'll notice that the color isn't as pink as before. That's caused by the salt absorbed from the solution.

If you slice open the corned beef, you'll be able to see how the salt has penetrated into the meat. The salt hasn't penetrated all the way.

The redder core of the meat proves this. Nevertheless, this is good corned beef. Remember, it isn't cooked yet.

Commercially manufactured Bully Beef is normally ground, but I don't currently have a meat grinder available. Therefore, rather than grinding it, I'm going to dice mine, making roughly 3/8" cubes out of it.

These cubes are then put into canning jars (I used pint jars), leaving about one inch of headspace.

As with any canning operation, cleanliness is paramount. You want to remove or kill any bacteria that are in the food that's being canned, as well as the jars themselves.

Boil the jars, lids, and rings in hot water before filling them, in order to ensure that they are sterile. Once boiled, only handle them with a canning jar lifter.

Canning normally requires filling the empty space in the jars with salt water. In this case, we're going to modify that procedure slightly. Since it's Bully Beef, we need gelatin. So rather than just mixing the gelatin with tap water, I'm going to mix it with the pickling solution, which already has a high salt content.

This provides the necessary salt water for canning, as well as the gelatin for the bully beef. However, I'll have to say, it doesn't look very good; rather like you're canning the meat in dirty water.

Filling the jars. The meat shown in front of the jars is enough for one more pint-sized jar

You'll need to find unflavored gelatin to use for making your Bully Beef, the kind that doesn't require any sugar. I found it at my local Wal-Mart, hidden between all the flavored gelatins.

You want to put enough of the salt water & gelatin mixture into the jars to just barely cover the top of the meat. Leave at least ¾ inch of headspace above the liquid, so that there is room for expansion. Use a butter knife to press down between the meat and the jar walls to remove any air bubbles. Add more liquid if necessary.

Once the jars are filled, screw on the tops and lids, but do not tighten them. The seal on the lids needs to be loose enough to allow the air inside the jar to escape, but not so loose that it doesn't seal as the contents contract, creating a vacuum.

Since this is meat, it needs to be canned in a pressure canner or pressure cooker. I'm using Crock-Pot's version of an Insta-Pot or Super-Pot, rather than a regular pressure canner. The basic difference is that the Super-Pot doesn't

need to be on the stove, as it has its own heat coil. Another difference is that it has a smaller capacity. I can only fit three-pint jars into my pot, rather than the eight jars that normally fit into a pressure canner.

Canning the Bully Beef requires 90 minutes at 10 PSI pressure. One advantage of the method I'm using is that my pot has a built-in timer, so I don't need to check it or keep track of the time.

Canning cooks the meat, and also preserves it. The finished Bully Beef will be edible at once, or at any time in the future when the jar is opened. There will be no need to cook the meat inside, although it can be browned or warmed if you desire. However, in an emergency situation, it will be fully safe to eat, without any further cooking.

Once the canning is completed, remove the jars from the water bath and allow them to cool slightly. Then move them to the refrigerator, before they reach room temperature, in order to allow the gelatin to set.

Using Your Bully Beef

The one thing that's going to be different about your Bully Beef compared to the commercially packaged Bully Beef is that you can't just slide it out of the can and slice it.

Rather, you're going to have to scoop it out of the jar with a spoon and use it that way. However, other than that, it should be the same tasty dish.

Jamaicans, Australians, and other island cultures have used Bully Beef in recipes for about a century now, most often adding a lot of spices.

There are a considerable amount of recipes available for using your bully beef, for day to day dishes, as well as for survival situations.

How To Make Fruit Leather And Add It To Your Stockpiles

Preserving a glut of fruit is easy compared to other foods – who doesn't love jam? But there's another delicious way of using excess fruit and giving it a shelf-stable form: fruit leather.

Fresh or Canned Fruit

Fruit leather is easy to make, so it's a great project to undertake with your kids (and also eat!). Use the fruits you have – most soft and hard fruits are suitable – but try to include an apple or two in the mixture, as the pectin helps the leather to set well.

You can even use canned fruit for this recipe. Peel apples and pears if you wish, but there's no real need.

Add Sugar if You Like

You can skip cooking the fruit before blending if you want to, but pre-cooking the fruit does reward you with a sweeter and more pleasant taste. If your fruit isn't sweet enough, add a pinch of sugar, but remember the natural sugars in the fruit will become more concentrated as they dry out in the oven.

The Way Our Grandparents Used to Make it

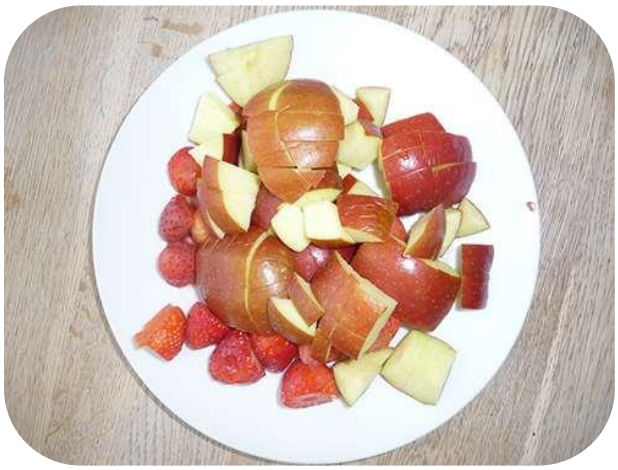
The old way of making fruit leather involved letting the pureed fruit dry slowly in the sun. Give this a go by all means, but for the purpose of this recipe we're sticking to the oven method.

Ingredients

- Ripe fruit, washed and wiped dry. Strawberries, blueberries, plums, apples and pears all work well.
- Sugar (optional)
- Oil (to use for greasing).

Method

Pre-heat oven to 120 degrees. Chop your fruit into small pieces.



Place in a saucepan over a low heat with a splash of water for around 10 minutes, until fragrant and softened.

Spread thinly and evenly onto a lightly oiled baking sheet and place in the center of the oven for 4 – 10 hours. Different ovens vary tremendously, hence the wide time range.

Place into a blender or food processor and pulse until smooth. Strain the mixture if you really don't like tiny seeds such as raspberry pips in there, but otherwise don't bother.

If you know yours is a 'hot' oven, then reduce the drying time. Either way, keep checking the leather as it dries out – it's surprisingly easy to leave it for too long!

When dry to the touch and not tacky, peel away from the parchment paper and allow to cool. Carefully cut into ribbons as broad or narrow as you like, turning over the strips to ensure both sides are dried.

Roll up loosely and store in a plastic or paper bag, clipped with a peg.

Storage

As well as adding to your store cupboard supplies, these sweet and healthy snacks are ideal for travel or camping out.

A natural energy boost, fruit leather will keep for around two months at room temperature and out of direct sunlight. You can keep them for longer in a refrigerator, where they should be good for up to six months.

Unless the grandkids find them first, that is...

How To Make The Portable Soup That Saved The Lewis and Clark Expedition

First off, you're probably wondering what in the world portable soup is. It's essentially a broth that has been dried and solidified for easier storage, preservation and portability.

It has a ton of flavor packed into a very small quantity. It has been called by many names, including pocket soup or veal glue. It's kind of like a homemade, old-fashioned version of the bouillon cubes you can buy in the supermarket today.

What Is Portable Soup Used for?

Portable soup has a long history, with the first recipes for it being found in the 17th century. It was quite popular in the 18th century due to the fact that it didn't require any preservation, and it was light and easy to pack. It was used as a portable food source for traveling, even on large and famous expeditions.

Lewis & Clark at Three Forks

Lewis and Clark packed portable soup in their food stores on their famous expedition to chart the U.S. It was also used as a food for invalids or others who had to be on a liquid diet, since at that time there were fewer options for keeping those people nourished.

Because it had to be cooked over an open fire, a much less precise application of heat than we have available to us today, portable soup was not easy to make before the advent of electricity. This meant that it had to be constantly watched, to keep the heat steady and prevent burning or scorching. Today, a slow cooker means that the temperature of the broth can be easily controlled.

How Do You Make it?

If you'd like to make some portable soup of your own, here's how you can make it using a more modern twist. Note that you could replace the beef shank roast with another high-collagen cut of meat like the neck, or you could even opt to make chicken portable soup by using a whole chicken.

Ingredients

- 5 lbs. beef shank roast
- Water
- Medium slow cooker
- Cheesecloth
- Large bowl for short-term storage of broth
- Cooling rack
- Small electric fan

Method

Make a bone broth – Place the roast in the slow cooker and fill the slow cooker with water. Turn it on low and cook for eight to ten hours with the lid on.

Mostly, you'll want to let it be while it's cooking, but make sure that the meat stays covered with water. Add more if the water level starts to get low.

Remove the solids – Pull the meat and bone out of the slow cooker and set aside. The bone should probably be trashed, but the meat can be used in another dish.

Let the cooker cool – Let the slow cooker cool completely. This will allow the fat to set on top of the broth and facilitate easy removal.

Strain the broth – Pour the cooled broth from the slow cooker through a piece of fine grade cheesecloth into another container. A large bowl will do nicely.

Clean the slow cooker – Give the slow cooker a good wash to make sure none of the fat and solids you've worked so hard to get rid of make it into the final broth. Those things could make the portable soup susceptible to going bad.

Reduce broth – Pour the broth back into the slow cooker and turn it on low for 24-72 hours with the broth uncovered. This will reduce the liquid from the broth, until there's about ½ inch left in the bottom of the slow cooker. When it's finished, it should look a lot like prepared gelatin.

Towards the end of this time period, be sure you keep a close eye on your portable soup to prevent burning. Burnt portable soup is disgusting enough to not be edible, apparently.

Let cooker cool again – Once again, let the cooker cool completely.

Dry gelatinous soup – Peel the gelatinous reduced broth out of the bottom of the cooled slow cooker. Place it on an ordinary kitchen cooling rack and place an electric fan in front of the jellied broth on high. Leave it until it's completely dried out. This should take a few days, but could take up to a week depending on the moisture level in your home.

You'll want to carry out the drying process in a place that will be relatively undisturbed, where dust and debris are unlikely to land on the broth. It would be tempting to toss this gelatin-like blob into the oven to dry it out, but that would absolutely destroy it. Many dehydrators are even out of the question since they utilize low heat to remove the moisture from food.

If you don't desire to use a fan, you can place the reduced broth on a clean, tightly woven cloth and turn it several times a day for a week or so until it's completely dry.

Break into pieces – You'll want to cut the portable soup into chunks that measure about one square inch. Regular (clean) scissors work great for this.

Store it by wrapping it in parchment paper or cheesecloth, placing it an airtight container, or keeping it in the fridge in a plastic bag. It can keep for up to six months in favorable conditions.

What Do You Do with Portable Soup?

It's important to note that this is a very basic portable soup recipe and it will act more like a soup base than a meal in and of itself. You'll likely want to add herbs, spices, greens, vegetables, or at the absolute very least, a little salt to make it palatable.

In an emergency where you need an energy boost post-haste, you could just place a small piece of portable soup in your mouth and allow it to melt, but that would be pretty gross. Instead, boil a piece of the soup in water with whatever other soup ingredients are handy until it's fully dissolved.

The Final Word on Portable Soup for Survival Situations

You might consider whipping up a couple batches of portable soup to add to your survival stores.

In a SHTF situation, this could provide you with nourishment that is compact and lightweight, which would make it perfect for bolstering your stores without taking up much room, or for adding to your bug-out bag.

Canning Pasta Sauce for Long-Term Preservation

Simple, easy to cook meals with minimal preparation and cleanup are ideal in a survival situation. Pasta cooks quickly with just heat and water, and it can last for decades if stored properly. Canned pasta sauce doesn't last a lifetime, but it'll retain peak flavor for about 2 years after canning, and will be perfectly fine to eat for at least 5 years, likely much longer.

The addition of a flavorful and hearty pasta sauce not only adds variety to your pasta, it also adds much needed calories and nutrition. Rather than canning up a simple, light, low-calorie marinara, I like to make a hearty sauce that transforms simple pasta into a feast just by popping open one shelf-stable jar.

Even if you have nothing else at hand, just a single quart jar and a pound of pasta will make a full satisfying meal for four adults in an emergency.

Consider adding mushrooms, onions, peppers or other vegetables to your sauce to increase the nutrient content. Sauté vegetables briefly in olive oil to improve their flavor and ensure that you're incorporating a bit of olive oil into the sauce for both flavor and calories. Also consider adding in half a bottle of a full-flavored dry Italian wine.

Pasta Sauce Canning Safety

Pasta sauce can safely be canned using the water-bath method if you take the necessary steps to ensure that there's enough acid in the sauce. While most people think of tomatoes as an acidic food, they're actually much less acidic than most fruits that are being canned using the water bath method. Your average tomato is right on the borderline for acceptable pH levels, and once you add in other high pH ingredients like onions and mushrooms, the

sauce will have to be acidified to ensure safe canning.

Most canning instructions will have you put a tablespoon of lemon juice into the bottom of jars before filling. The lemon juice acidifies the sauce and ensures that it's within the acceptable range for water bath canning.

The juice is put directly into the jar because it's hard to estimate exactly how much sauce you have in your sauce pot, and it's safer to directly add a tablespoon to each pint jar or 2 tablespoons to each quart. I prefer to add balsamic vinegar instead of lemon juice, because the flavor in the balsamic vinegar complements the sauce.

If you're worried about whether or not your recipe is acidic enough, and don't want to change the flavor by adding additional acid, pressure canning is a foolproof way to sterilize just about any pasta sauce recipe.

Keep in mind that any recipes that contain meat must be pressure canned, as you cannot can meat products using the water bath method. But to be sure your food is safe for consumption; you should check the government's instructions and recommendations here.

How to Can Pasta Sauce Using the Water Bath Method

Fresh or canned tomatoes are both acceptable for homemade pasta sauce. If you're using fresh tomatoes, they should be peeled and seeded. The peels and seeds cause the sauce to be bitter and will give it a bad flavor over time as it's stored in your pantry. Peel the tomatoes by dropping them into boiling water for 30 to 60 seconds and then removing them into a sink full of cold water. The heat shock will make it very easy for you to slide the skins off with your fingers.

Once the tomatoes are peeled, slice them in half along their equator line to expose all the seed pockets. Hold them over a bowl and squeeze the tomato halves in your hand to squeeze out the seeds. Chop the seedless tomatoes into chunks and put them in a pot.

If you're making a smooth marinara instead of a chunky sauce, using a home food mill saves a lot of time and effort. Chop the tomatoes with skins and seeds intact and process them through your food mill which will separate out the skins and seeds for you, leaving nothing but a smooth tomato sauce.

Add the tomatoes to a large pot and simmer with herbs, spices, salt, red wine and sautéed vegetables of your choice. Cook on low until the sauce reaches a serving consistency. Cooking time will vary based on the type of tomatoes used. For a shorter cooking time and higher yield, choose Roma or sauce tomatoes which have a lower water content.

Ladle the sauce into jars, leaving 1/2-inch headspace. Attach lids and bands, and process in a water bath canner for 35 minutes for pints and 40 minutes for quarts.

Allow to cool, and then remove canning rings for storage.

Choosing a Recipe

Taste in sauce varies dramatically from family to family. Try out a few different recipes for home use without canning them and once you've found a version you enjoy, increase the batch size, add enough acid for safe water bath canning, and start to preserving.

As a starting point, you can try this recipe found below:

Pasta Sauce Recipe for Canning

Yield: Roughly 9 Pints

Ingredients

- 30 lbs. tomatoes (peeled, seeded and chopped)
- 1 cup chopped onions
- 5 garlic cloves, minced
- 1 cup chopped celery or green peppers
- 1 lb. fresh mushrooms, sliced
- 4-1/2 teaspoons salt
- 2 tablespoons oregano
- 4 tablespoons minced parsley
- 2 teaspoons black pepper
- 1/4 cup olive oil
- 1-2 cups dry red wine
- 1 teaspoon lemon juice or balsamic vinegar for each pint canning jar.

Add peeled, seeded and chopped tomatoes to a large pot and simmer.

In another pan, sauté onions, garlic, peppers and mushrooms until browned. Add sautéed vegetables to the tomatoes, along with remaining herbs, spices, salt, oil and wine.

Simmer on low until it reaches the desired consistency. Process for canning. And here's the finished product:

Don't forget to give yourself a big pat on the back. This is a lot of work, but there's nothing better than popping the seal and enjoying the fruits of your labor and sharing them with friends and family!

Deliciously Dehydrated Chili Bean Soup

Chili, chili con carne, or even chili bean soup, is an American favorite, especially in the Southwest. Originally from Texas, it is a true American food which was popular on the frontier.

While the recipe for chili can vary extensively, it generally includes kidney beans, meat (usually beef) a tomato-based sauce, and some chili powder. But it is the spices which give chili its unique flavor. An extensive list of spices is used, one of the most important being cumin.

High in protein, chili can be an excellent survival food. I have many cans of chili in my survival stockpile, made following the recipe, except for the kidney beans. I made it that way on purpose, to take up less room. When the time comes to use it, I'll cook up the beans and add them to what I've got in the cans.

That's great as long as I'm bugging in; but if I have to bug out, I'll have to leave all that canned chili behind; especially if I'm bugging out on foot. While it would be great to be able to take my chili along, canned food, especially food canned in glass jars, just isn't real practical for a bug-out bag. What I need is dehydrated chili.

Why not? I've dehydrated a lot of things through the years, just as I've also canned a lot of things. So, it only makes sense to try making dehydrated chili. But I wanted chili that could be prepared quickly on the trail, not something that would take all day to cook. So that means I need the beans cooked, then dehydrated, so I'm not using dried beans. It might sound harder for now, but it will be easier when it's time to eat that chili.

Start with Chili

Having set out to make delicious dehydrated chili, I needed some chili. So, I whipped up a batch.

Now, you probably have your own chili recipe, but just in case you don't, here's mine:

Ingredients

- 2 lbs. lean ground beef
- ½ large white onion
- 1 large bell pepper
- 2 teaspoons minced garlic
- 2 cans chili beans (kidney beans) – drained
- 1 – 15 oz. can dice tomatoes – drained
- 2 – 15 oz. cans tomato sauce
- 1 teaspoon coriander powder
- 1 ½ teaspoons ground cumin
- 1 teaspoon (or more, depending on your preferences) chili powder
- 1 teaspoon allspice and 1 teaspoon oregano

- ½ teaspoon ground black pepper.

Method

Dice the onion and bell pepper. I like to dice them in small pieces for dehydrated chili, as it will break up better, when dried.

Brown the ground beef, chopping it into small pieces while you brown it. The tool shown in the photo below is ideal for chopping ground beef while frying it. If you don't have one, they are readily available at most large supermarkets, found next to the other cooking utensils and in general merchandise big box stores.

Drain the grease from the cooked ground beef. I recommend using paper towels to remove as much grease as possible. The grease will not dehydrate well.

Mix all ingredients together in a large stock pot. Bring to boil and then reduce heat to a simmer.

Allow to simmer, boiling off the excess liquid. Since we are going to dehydrate this chili, we don't want any unnecessary liquid. Rather, we want a heavy, thick chili; not so thick that it burns, but close.

Dehydrating the Chili

Surprisingly, cooked chili dehydrates amazingly well. I wasn't too sure about that until I tried it. Not only does it dehydrate well, but it reconstitutes to almost the same form it had before dehydration, with very little effort.

Typically, when you're trying to dehydrate something that's runny, like a pot of chili, you have a bit of a problem.

Dehydrators have slotted racks to place the food being dehydrated on. Of course, runny foods drip through that.

So, someone came up with the idea of using silicone sheets, placed on top of those racks, to spread out runny foods to be dehydrated. It works quite well; I make my own fruit roll-ups that way all the time.

There's just one problem with that. That is, I don't have silicone sheets for the dehydrator I'm using for this project.

Needing alternative, I used parchment sheets, like the ones commonly used for baking. Turns out they worked just like I hoped they would.

Since I didn't want to make a mess, I didn't run my chili all the way to the edges of the sheets. As you can imagine, the layers of chili weren't quite even, as chili is kind of lumpy. Nevertheless, I tried to spread it out as well as I could, without going all the way to the edges of my parchment sheets.

You need to use a dehydrator which can go up to 160°F for this process, seeing as you will be dehydrating meat. Most dehydrators will do that, but it is best to have one which gives you an actual setting or provides a temperature readout, so that you will be able to verify that you're dehydrating it at a hot enough temperature.

It took about four hours for my chili to dehydrate, considerably less than I expected. But I had cooked my chili long enough to boil off most of the excess water. Keep that in mind; as the water content of your chili will affect how quickly it dehydrates.

The dried chili has much less bulk than it started out with and tends to crack extensively as it dries. The beans are likely to do so as well, even to the point where the skins of the beans might crack. That doesn't really make much difference, except in the appearance of the reconstituted chili.

Remove the chili from the dehydrator and break it up further with your fingers. The smaller the pieces you have, the more consistently you can bag it in equal sized portions.

Small pieces will also reconstitute easier than large ones, when it's time to eat it. Even so, don't try busting the chili up with a hammer or rolling pin, as you'll bust up the beans and pieces of pepper, and that really doesn't help with anything.

I packaged my chili in servings of 1 cup each. That may seem like a small serving; but remember, we're going to reconstitute this, adding more water to it. That's an ideal size for your bug out bag; but if you're packaging it to

use for bugging in, you might want to bulk-pack it like other dried foods.

Reconstituting the Chili

The chili will need to have water added to it and be reheated in order for it to be edible. You should add water to the dried chili in a saucepan, at a rate of 1 cup chili to 1 cup water. If you like your chili a little runnier, or want to soak up the broth with crackers, you might want to add a bit more water.

Place the saucepan with the chili and water in it over the fire and bring to a simmering boil. Don't allow it to get to a full boil or you'll be losing too much water that is converted to steam. All we want to do is heat it up to eating temperature, not cook it again.

If you're going to reconstitute your chili over an open fire, you'll want to allow it to burn down to coals first. The yellow flame of a fire is nowhere near as hot as the red glow of the coals.

Of course, if you're going to be doing this over a stove, you'll be able to control the heat and choose the exact temperature you want.

The chili needs to simmer for no more than five minutes. Any more than that and you'll be losing too much water and may need to add some more.

Once the five minutes have passed, remove it from the heat and allow it to sit another ten minutes, so that it can finish soaking up the water. Then it is ready to eat.

How To Make a Nutrient Packed Sauerkraut

By Burying Cabbages Like the Mongol Tatar People

The health food industry is once again going through a transformation. Actually, that's something that happens all the time. As our understanding of the human body increases and improves, things that yesterday were thought to be healthy, today are being proven to be harmful.

The current trend is moving towards getting the micronutrients that nutritionists all talk about from real foods, rather than from pills. That makes more sense for a number of reasons, not the least of which is that natural foods will digest better, making it easier for our bodies to extract the necessary nutrients. It has been shown rather conclusively that pills don't do that as well.

Sauerkraut and Probiotics

One of the newer discoveries about dietary health that is being talked about is probiotics. These aren't actually nutrients, but rather microorganisms which live in the gastrointestinal tract, helping our bodies digest our food and extract these nutrients. There are somewhere between 300 to 500 different types of these bacteria living in all of our bodies.

We have to ask the question though, "How well are they living?" In today's modern society, doctors readily prescribe antibiotics, even when they aren't needed. According to the CDC, enough antibiotic prescriptions were written in 2015 to account for five out of every

six people taking them. But here's the really scary part; at least 30% of the antibiotics consumed are unnecessary. So, 24% of the overall population took antibiotics they didn't need to in that year alone.

But That's Not a Problem, Is it?

Actually, it is. Antibiotics are non-discriminatory. They'll go after any microorganism they can, especially bacteria. In other words, regardless of whether or not those antibiotics were needed, they killed off some percentage of the probiotics living in 24% of the people, in that year alone.

Assuming that all the scientists and nutritionists are right and those probiotics are necessary, then what our medical community did for us in 2015 was to give 24% of us digestive problems. And they're continuing to do that year after year, without exception. But digestive health isn't the only thing that these

probiotics do for us. They also:

- Create and preserve B vitamins, Omega-3 fatty acids, and beneficial enzymes
- Boost the immune system
- Detoxify the body by drawing out some heavy metals and other toxins

So, What Does Sauerkraut Have to Do with This?

Sauerkraut, like other fermented foods, is created through a process called "lacto-fermentation." This is a normal process in which naturally occurring bacteria feed on the starch and sugar in food, creating lactic acid.

In other words, making and eating sauerkraut is a great way of boosting the probiotics in your body, and thus improving your health. You could buy commercially made sauerkraut, but that isn't going to be as rich in probiotics as what you make yourself. Besides, based on my own experience, homemade always tastes better.

What You Need in Order to Make Sauerkraut

Sauerkraut is actually very easy to make. You need very few ingredients and there is only a little preparation work. All you'll need is:

- Cabbage – One small cabbage will make about one quart of sauerkraut
- Pickling salt – You can use Pink Himalayan salt, which is very popular now due to its mineral content
- Quart canning jars – If you want to be original, you could go with ceramic crocks with lids; but the canning jars are cheaper to buy, easier to use, and easier to store

Making Your Probiotic Sauerkraut

This is just about as easy a recipe as you can find. Even so, I'd recommend sharpening a large kitchen knife, like a French chef's knife, before starting. It's easier to cut with a sharp knife and you're less likely to cut yourself with it.

1. Cut the cabbage into eight roughly equal sections, like slicing an apple into wedges, with the core removed.

2. You'll want to shred that cabbage, turning it into thick ribbons.

This can be done with a knife, cutting your wedges into thin slices, with a food processor, or with a grater. Personally, I prefer doing it

with a knife. Separate the cut pieces so that they don't remain stuck together.

3. Place the cabbage into a large mixing bowl and sprinkle salt over the top. You'll want to use the salt at a rate of 3 tablespoons per 5 pounds of cabbage.

4. Mix the salt into the cabbage with your hands. The cabbage should begin to wilt and generate water. If it does not generate water, add more salt. Keep mixing for about five minutes, then allow to sit for an additional 10 minutes.

5. If you want to add any additional seasonings, this is the time to do so. Caraway seeds are commonly added to sauerkraut, but some people also add garlic and black pepper.

6. Pack the wilted cabbage into a quart canning jar. One small cabbage should fill a jar. Push the cabbage down as you go, filing the space.

7. Pour any water from the bowl into the jar, covering the cabbage. If the cabbage isn't fully submerged, add salt water to cover it completely, however leave ½ inch of headspace. Run a butter knife down the sides to break up any air bubbles.

8. Place the lid on the jar and allow it to sit for at least 10 days in a room with a temperature between 65°F and 75°F. During the first 24 hours open the jar and press down the cabbage

several times, adding more salt water if necessary.

9. The fermenting process takes 10 to 14 days. If you see bubbles forming during this time, that's normal. However, if any mold forms, remove it and discard it. Taste the sauerkraut after 14 days to see if it is done. If not, taste it every day, until you are satisfied with the flavor.

10. Once the sauerkraut has reached a satisfactory flavor, refrigerate it. Refrigerated, your sauerkraut should keep for six months to a year, but usually it's a lot longer than that.

Please note that you do not want to can your sauerkraut if you are making it for the probiotics. Canning temperatures would be high enough to kill those off. Since sauerkraut is a fermented food, it should not need normal canning to preserve it. Merely keep it at a cool temperature either in a root cellar or a fridge.

However, if you want to can sauerkraut for long-term survival storage, you must understand that you will be destroying the probiotic benefits of it. Canned, it should keep indefinitely. But you would be better off growing cabbage in your survival garden and making sauerkraut as part of your survival strategy.

Burying Cabbage for Sauerkraut

The Germans were not the only people to ferment cabbage to make sauerkraut. The Mongol Tatar people did too, except they would bury their sauerkraut for the fermenting and storage process. The Koreans also make Kimchi, which is similar to sauerkraut.

If you want to make your sauerkraut like the Mongol Tatar people, you will need glazed clay crocks, with snug-fitting lids. The process would be essentially the same as shown above, with the exception of burying those crocks in the ground.

So, why would you do that?

Mongolia is a country known for blistering heat and freezing cold. Burying the crocks allowed the ground to act as an insulation, protecting the fermenting cabbage from temperature extremes. While this was hard to do in the wintertime, when the ground was frozen, it was fairly easy during the warm parts of the year.

If you live in a hot part of the country, you might want to bury your crocks of fermenting sauerkraut during the summertime, in case the power grid goes down and you are left without air conditioning.

Otherwise, the high temperatures of summer would speed up the fermenting process, as well as the breeding of bacteria. That would lead to an increased likelihood of your sauerkraut growing mold, instead of just fermenting. Buried, the earth would protect it from those high temperatures and allow it to ferment normally.

Just $5 a Week Can Get Your Family over 295 Pounds of Food

Looking at the state of the world today, with all the threats to our society and way of life, it's easy to assume that anyone would see the benefits of preparedness. Personally, I think most people do realize that being prepared is a good idea, but even so, preppers make up a small minority of Americans.

This is due to several reasons. Some people are optimists that believe any crisis can be avoided. Others believe the government will look after them if help is needed. For most, though, the problem is probably related to money.

Prepping does cost money; there's no way around that. It isn't all about major purchases, like bug-out locations or bunkers, though. One of the most basic and important steps is to build up a stockpile of food that will get you through the critical first few weeks of a crisis. That's still a major investment if you just head to the grocery store and buy three months' worth of food – major enough to dampen almost anyone's enthusiasm.

There's some good news, though. You don't need to buy your emergency food stockpile all at once. With some patience, and an extra $5 a week on top of what your regular groceries costs, you can build up a large, well-balanced food reserve within a year. Most of us can find a way to put up $5 a week; it might be as simple as dropping a couple of luxuries from our shopping list and replacing them with cheaper, but more useful items for our reserves. You'll be surprised how much food $5 can get at a store like Walmart or Sam's Club, if you spend it on large, economical packages.

Do it right and you'll have a useful emergency supply in just a few weeks. Within a year you'll have close to 300 pounds of food stockpiled – all you need to outlast a major crisis.

Here's How to Do it by Spending Between $4 and $6 Every Week.

Week 1 – 6 Pounds of Rice

Rice is a great emergency food – it's filling, and contains plenty of carbs for energy. It's also easy to prepare and very versatile.

Week 2 – 8 Pounds of Pinto Beans

Dried beans are another staple prepper food. They store well, and once rehydrated, they can be used as a side dish or added to soups and stews. Combine them with rice and you also get a complete protein-filled meal that contains all the amino acids your body needs.

Week 3 – 12 Cans of Vienna Sausages

Add some meat to your survival diet with convenient cans of Vienna sausages. These can be grilled, chopped and added to stews, or eaten straight out of the can.

Week 4 – 10 Cans of Tomato Sauce

Rice and pasta are nutritious, but they can also get pretty boring. Adding tomato sauce to your stockpile allows you to cook tastier recipes – and that's good for morale.

Week 5 – 10 Pounds of Sugar

Sugar is packed with energy that your body can access in a hurry. It also lets you make sweet drinks and improves a ton of other recipes.

Week 6 – 8 Pounds of Flour

Flour has a lot of uses around the kitchen. Besides using it for baking bread and cakes, you can also use it to thicken sauces and soups. It's a good source of carbohydrates, and, if you get all-purpose flour, it's enriched with other nutrients too.

Week 7 – 1 Gallon of Canola Oil

You need fat for a balanced diet, and oil is a great source. Canola oil is good for cooking too.

Week 8 – 6 Pounds of Rice

You're starting to get some variety, so go back and increase your supply of this staple.

Week 9 – 6 Pounds of Navy Beans

Add more beans as well, but there's no need to get the same kind – variety is good.

Week 10 – 8 Cans of Fruit

Fruit is nutritious, rich in energy, and tasty. You can get more by buying a multipack, or you might prioritize variety here.

Week 11 – 1 Can of Powdered Milk

You'll want this for your coffee, and it can also be reconstituted and used to replace fresh milk in many recipes.

Week 12 – 6.5 Pounds of Salt

We keep getting warned about salt, but it's an essential part of our diet – especially if we're working hard. Pick up a four-pack of iodized salt; the iodine is valuable if there's any kind of nuclear hazard.

Week 13 – 12 Cans of Tuna

Tuna is rich in protein and essential fatty acids. It's also tasty and can be used in all sorts of recipes. You can pick up a 12-pack of small cans for just over $5.

Week 14 – 6 Pounds of Pasta

Another carb-loaded staple, pasta is the base for a range of tasty meals. Smaller pasta shapes cook faster than larger ones, using less energy.

Week 15 – 8 Cans of Vegetables

Canned vegetables are as nutritious as fresh ones, and easy to cook – all you need to do is warm them up.

Week 16 – 6 Pounds of Rice

Yep, more rice.

Week 17 – 6 Pounds of Black Beans

More beans, and more variety.

Week 18 – 12 Cans of Vienna Sausages

The ratio of carbs to protein is becoming unbalanced, so add more sausages.

Week 19 – 4 Pounds of Peanut Butter

Peanut butter makes for a quick and tasty sandwich, it can be adapted into a great sauce for chicken, and it's loaded with energy, fat and protein. You can get a 4lb jar of it for $6.33 at Walmart.

Week 20 – 4 Cans of Chicken

Just for a change from Vienna sausages, pick up a four-pack of canned chicken breast chunks. These can be used in a huge list of recipes.

Week 21 – 3 Pounds of Shortening

You can bake a lot more if you have shortening. Get a three-pound can of Crisco.

Week 22 – 10 Pounds of Sugar

Increase your sugar supply this week.

Week 23 – 8 Cans of Vegetables

More vegetables are always good. Get something different this time to keep your diet interesting.

Week 24 – 6 Pounds of Rice

You saw this coming, didn't you?

Week 25 – 8 Pounds of Pinto Beans

And this.

Week 26 – 10 Cans of Tomato Sauce

You'll need sauces for all the rice and beans you have.

Week 27 – 6 Pounds of Pasta

You'll need sauces for this, too.

Week 28 – 6 Jars of Assorted Spices

Add more variety to your sauces and other cooked foods by picking up six jars of herbs and spices. Get the basics – onion and garlic powder – then branch out. Try paprika, chili flakes and oregano.

Week 29 – 8 Cans of Fruit

Vegetables are probably more important, but some extra fruit is good too.

Week 30 – 1 Gallon of Canola Oil

Make sure you have enough oil to cook your growing stockpile.

Week 31 – 1 Can of Powdered Milk

Milk is something you'll really miss when you run out.

Week 32 – 6 Pounds of Rice

Yes, you already have a lot of rice. Get some more.

Week 33 – 12 Cans of Tuna

More protein that isn't Vienna sausages.

Week 34 – 4oz of Yeast

Get a jar of dried yeast to make your bread rise.

Week 35 – 8 Pounds of Flour

Bread is something else you'll really miss, so keep expanding your baking supplies.

Week 36 – 1 Pound of Honey

Honey is an amazing sweetener. It also has natural antibiotic properties and can help wounds heal.

Week 37 – 8 Cans of Vegetables

Again, go for variety here.

Week 38 – 6-Pack of Mac and Cheese

Sometimes you need comfort food in a hurry. Mac and cheese is the perfect choice.

Week 39 – 6 Pounds of Pasta

You can't have enough of this stuff, really.

Week 40 – 6 Pounds of Rice

You can't have enough of this either.

Week 41 – 6 Pounds of Navy Beans

You know what I'm going to say here.

Week 42 – 3 Cans of Corned Beef Hash

Get some more variety in your protein intake. Hash can be eaten on its own or used to improve pasta sauces.

Week 43 – 8 Cans of Vegetables

You should have enough vegetables by now to make your rice and bean dishes a lot more interesting.

Week 44 – 10 Pounds of Sugar

There are ways to make sugar yourself, but it's much easier to buy the stuff and spend your ti-

-me collecting other foods.

Week 45 – 12 Cans of Vienna Sausages

I really hope you like these.

Week 46 – 10 Cans of Tomato Sauce

By now you have enough ingredients and spices to turn this stuff into some pretty tasty recipes.

Week 47 – 2 Gallons of White Vinegar

Vinegar improves a lot of recipes and has plenty of other uses around the house.

Week 48 – 6 Pounds of Rice

Relax. This is the last load of rice.

Week 49 – 8 Pounds of Pinto Beans

And these are the last beans.

Week 50 – 4 Cans of Chicken

A lot of prepper stockpiles are low on meat. Avoid that by adding more chicken.

Week 51 – 4 Pounds of Peanut Butter

Peanut butter is full of energy and easy to digest, so it's a good way to get calories into someone who's feeling unwell.

Week 52 – 8 Cans of Vegetables

Beans and rice are a lot less boring when you mix some vegetables in.

If you follow this shopping plan, after a year you'll have a massive 295-pound stockpile of food. The core of it are 36 pounds of rice, 40 pounds of beans, 18 pounds of pasta, and 16 pounds of flour.

To add protein, other nutrients, and variety, of course, you'll also have 30 cans of tomato sauce, 40 cans of vegetables, 16 cans of fruit and 67 cans of meat or fish.

On top of that you'll have salt, spices, and some other extras that will let you turn your stockpile into tasty meals.

Best of all, you can do this without having to make a single huge purchase; just skip a couple of bottles of soda or a few bags of snacks each week, and you can spend the money on building up a valuable emergency supply instead.

19 Foods That Will Outlast You

"*If the grocery shelves are empty, you are only nine meals away from anarchy*" – Mike (Doomsday Preppers)

All the foods listed below should be stored in similar conditions. The four main enemies of (preserving) any food are:

- Oxygen – causes food to oxidize
- Sunlight – speeds up the spoiling process and can produce chemical reactions;
- High Temperature – speeds up the spoiling process;
- Moisture – allows bacteria to grow.

So, remove as much oxygen as possible when storing a food item in an impermeable container. Store in a cool dark dry place.

1. Hardtack

Hardtacks contain Sodium, Potassium, Protein, Vitamin B6, Carbohydrates, Zinc, Calcium … I'm not going to write down the whole list because it contains a little bit of all Vitamins and Minerals.

Records show that ancient Egyptian and Roman sailors had their own version of Hardtacks.

But the Civil War is where most people remember it from, and it was that war that proved the extreme longevity of this hardy biscuit. Many of the initial supplies fed to Union and Confederate troops were leftovers from the Mexican-American War, and so much Hardtack was made during the Civil War that it wasn't completely eaten until the Spanish American War, 50 years later.

2. Dry Milk in Nitrogen Packed Cans

Powdered milk is a good source of Calcium, Vitamin D, Protein, and also contains Vitamin A, Vitamin B, Vitamin C, Vitamin E and Potassium. If the dry milk purchased was not packaged for long term storage, then it should be repackaged right away.

Powdered milk canned with nitrogen or carbon dioxide to replace air (which contains oxygen) will keep longer (decades) than powdered milk exposed to air. Vacuum canning or oxygen absorbers will also decrease the available oxygen.

After opening a package of dry milk, transfer the powder to a tightly covered glass or metal container (dry milk can pick up odors from plastic containers) and keep it in the refrigerator. Unsealed nonfat dry milk keeps for a few months; dry whole milk for a few weeks.

3. Maple Syrup

According to the Massachusetts Maple Producers Association, unopened maple syrup will keep indefinitely, but it must be refrigerated once opened.

Opened maple syrup can grow mold at room temperature. Don't worry – bring the syrup to a slight boil, skim the surface, and pour into a clean container and refrigerate.

A portion of ¼ cup of maple syrup contains 100% of the daily value of manganese (helps the immune and nervous systems). The same amount of pure maple syrup also contains 18% of the recommended daily value of Zinc. And of course, lots of calories!

4. Hard Liquor

Distilled spirits do not age (or mature) in the bottle. This means that your 20-year-old unopened bottle of Scotch will taste the same as it did the day it was bottled. Alcohol contains only calories – considered "empty" calories, because alcohol contains no beneficial nutrients, such as vitamins and minerals.

5. Ramen Noodles

When you buy a small plastic pack of ramen noodles, check out the print that indicates the expiration date or best before date. This information only tells you that the food is best consumed on or before this date.

The truth might be that not even Maruchan (the producer) knows the exact expiration date. On their website you can find these indications: "We recommend that you refer to the "Best By" code on our packages and suggest that our products should be consumed in a timely manner. WHILE RAMEN NOODLES HAVE A VERY LONG SHELF LIFE, certain conditions over time may reduce the soup quality."

Some even go as far as to say that they last forever.

Instant noodles undergo a dehydration process wherein moisture is removed from the food item to prevent growth of microorganisms.

Afterwards, the preservatives are added. These are chemicals used to make any food item last for a long time. For the familiar packaged and dehydrated noodles available at most U.S. supermarkets, a package of ramen noodles delivers around 380 calories; of these calories, 131 come from fat, another 223 come from carbohydrates and 31.6 come from protein.

6. Instant Coffee, Tea, and Cocoa

Storing these favorites will definitely keep the morale up in your household. Instant coffee that is vacuum freeze-dried will last forever if kept in a dry airtight container.

7. Baking Soda

When left sealed, it will last indefinitely. Store in an airtight container in a cool, dry area.

Besides Sodium (52%), baking soda contains almost no ingredients of nutritional value.

8. Apple Cider Vinegar

Because of its acid nature, vinegar is self-preserving and does not need refrigeration.

White distilled vinegar will remain virtually unchanged over an extended period of time. And, while some changes can be observed in other types of vinegar, such as color changes or the development of a haze or sediment, these are only aesthetic changes. The product can still be used and enjoyed with confidence.

What is “Mother”? “Mother” of vinegar will naturally occur in vinegar products as the result of the vinegar bacteria itself. Mother is actually cellulose (A natural carbohydrate; it is the fiber in foods like celery and lettuce.) produced by the harmless vinegar bacteria. After opening, you may notice “mother” beginning to form. Vinegar containing “mother” is not harmful or spoiled. Just remove the substance by filtering the vinegar, and continue to enjoy the product.

9. Salt

Salt is an essential mineral needed by the human body in order to function properly. Salt has been here from the beginning of time, and will probably still be good to eat at the end of time.

10. Bouillon Cubes

Bouillon is a great prepper’s item. I like homemade stock for most things, but bouillon

is great to have on hand for when you run out, or just to throw into soups or stews for a bit of extra flavor.

Because bouillon has large amounts of salt, it can last a long time.

The only problem for long-term storage is the fact that there are fats and oils in the cubes that can go rancid even with the salt. But vacuum sealing may allow it to outlast you. Rancidification does not occur without oxygen or humidity.

So, how long it stays good past the "best by" date depends on storage conditions only.

Also, it's great to just heat some in water when you have a sore throat or stomach ache.

11. Raw Honey

Honey is one food that never spoils! Although the look of your product will change somewhat over time, it will never actually spoil. It will begin to look yellow and cloudy instead of golden and clear and will get thicker and grainier over time, and will eventually have a white and hard appearance. But it is still good. In this form, the honey may have started the process of crystallizing.

To decrystallize honey, place the sealed jar in a warm, non-boiling pot of water and heat the honey. The crystals will dissolve as the honey heats. Do not add water to the honey. This will raise the moisture content and the honey will ferment.

12. Oxygen-Free White Rice

White Rice lasts for 4-5 years but oxygen free white rice will last at least 30 years. Brown rice is a whole natural grain with only the hull removed, thus the fats between the remaining layers cause it to spoil more easily than white.

White rice has been found perfectly preserved in Egyptian tombs. Rice will not store forever, especially brown rice which has more fats and oils than white rice (but is better for you). Brown rice may become oily and give off a rancid odor because of its essential fatty acids that go bad as they oxidize.

One thing to watch for is the presence of the rice weevil, a tiny reddish-brown bug.

13. Soy Sauce

Soy sauce is made of soybeans, wheat, salt and water, which are put through a process that brews, ferments, pasteurizes and stabilizes the end product. Even after opening the bottle, it is still good to eat for 2-3 years.

14. Sugar

No matter if white, brown or powdered, sugar

won't spoil (sugar inhibits microbial growth) as long as it's stored in an airtight recipient, away from humidity and sunlight.

15. Pure Vanilla Extract

Vanilla extract has an alcohol base so it doesn't really go bad. You should, however, know that the alcohol will slowly evaporate (when the bottle is open). As the years go by, the flavor of the vanilla extract might become more intense.

That's because there's less alcohol in the liquid. All in all, if you always keep the bottle of vanilla extract closed, it'll last decades, so you can use that bottle of vanilla extract you bought 20 years ago without any worries.

16. Corn syrup

Corn Syrup is safe to eat for an indefinite period of time, regardless of whether it has been opened or not. When brushed onto baked ham, barbecued meats, baked vegetables or fresh fruit, it is an ideal glaze. In baked goods, corn syrup holds moisture and maintains freshness longer.

Corn Syrup contains only sugars – which means calories (71%). So, 1 ounce of Corn Syrup has 79 calories.

17. Pemmican

Invented by the natives of North America, pemmican was used by Indian scouts as well as early western explorers. These people spent a great deal of time on the go and depended on having portable and filling, high-energy and highly nutritious foods that would last for long periods of time.

Pemmican is light, compact, high in protein, carbohydrates, vitamins, and, if cooked properly, can last anywhere from a few years (decades) up to a lifetime without refrigeration!

18. Dry Beans

Dried beans can last almost indefinitely in the absence of oxygen and light, but gradual moisture loss will affect taste and texture. Old beans may need longer soaking and cooking times.

Dry beans have the highest protein content of any seed crop. They contain all essential amino acids, and also fiber, starch, minerals and some vitamins.

19. Corn starch

Basically, the only way cornstarch will go bad is if it gets wet. You can thicken gravies and sauces for years with just one box of corn starch. Corn starch contains mainly Carbohydrates (91%) and some proteins and iron. Only one tablespoon contains 30 calories.

Rumor has it that Twinkies may last for a lifetime despite their official shelf-life (of only a month). But this is NOT true. This has been tested a number of times. They go stale just like other bread products, and become moldy after 5 weeks or so, and decay into a pile of mold after a few months. And besides, I don't think they are available in the US anymore (I think you can only find them in Canada).

Most canned goods can't last for a decade. Have you ever opened a tuna can 5 years after its expiration date? It's not good anymore!

22 Ingenious Hacks To Make Food Last Longer

If you, too, have some food reserves set aside, then you probably already understand the value of food. And if you're like me, then you probably hate yourself every time you waste food.

Being a prepper has a lot to do with canned goods, but it also has a lot to do with learning how to save space and extend your food's shelf life.

So, if you're a prepper too or just a concerned citizen who is tortured by the limited shelf life of fresh foods, these tips are for you:

#22. Bananas

By wrapping the stems of the bananas in plastic wrap, they'll brown much slower.

#21. Herbs

When you want to pick your herbs, you just need a little olive oil in which to freeze them in. Then they last for ages.

#20. Mushrooms

Keep mushrooms in a paper bag, not a plastic bag. A plastic bag will trap moisture and cause them to mildew.

Put them in a paper bag in the fridge or in a cool, dry place.

#19. Delicate Herbs

Store delicate herbs like flowers; then cover with plastic, secure with a rubber band, and refrigerate. This is the best way to keep delicate herbs like parsley, basil, cilantro, and chives fresh for as long as possible.

#18. Onions

Tie a knot between every onion with a pair of nylon stockings. By doing so, the onions will last up to 8 months because they're aired out, and not squashed against each other.

#17. Potatoes, Onions, and Apples

These should always be stored separately from one another. When stored together, their shelf-life is reduced.

A system like this, for example, will help. The potatoes are stored in the dark so they don't produce germs or toxic solanine.

#16. Keep Guacamole Green

Spray leftover guacamole with cooking spray before putting it back in the fridge. There are a number of ways to keep avocado green, and oil is one of them. You should also keep the pit in the guacamole.

#15. Eggs

Eggs can be frozen of course. Simply crack them into an ice-cube container, add a little salt or sugar (that prevents them from becoming grainy), and use as needed.

#14. Tomato Sauce

Tomato sauce can also be put in a freezer bag and then frozen. After an hour, it should be frozen enough so that you can use the blunt edge of a knife to separate the mass into individual portions. Use the knife to push the sauce back and forth.

You can also use an ice-cube container.

#13. Celery and Broccoli

These vegetables last much longer and remain crunchy if stored in the fridge wrapped in aluminium foil.

#12. Vegetables

Vegetables should be frozen after being lightly blanched. This gives them a longer freezer-life. To blanch your vegetables, briefly boil them, and then plunge them into ice water.

#11. Lettuce

Lettuce lasts longer when wrapped in a paper towel because the extra moisture is soaked up by the paper towel.

#10. Apples

Apples can last for a long time when stored properly. In the fridge, they can last up to six months. You just need to keep an eye out for that famous rotten apple and get rid of it. Otherwise, it'll spoil the rest.

#9. Mince

With the same method used for the tomato sauce, you can freeze and portion the leftover ground meat. Then just thaw and use as required.

#8. Cheese in Buckets

Cheese in buckets lasts twice as long when it's stored upside down!

#7. Instead of Tupperware

Instead of plastic containers, store your food in glass jars. It lasts much longer.

#6. Cheese

Store your cheese in special grease-proof paper. It lasts longer and doesn't taste like plastic.

#5. Pineapple

Remove the crown, and stand the pineapple on its head. It'll make the pineapple enjoyable for much longer.

#4. Spring Onions

Leave spring onions to grow by placing them in water. When you need them, they'll be fresh and crisp.

With the bulb, you can even grow completely new onions.

#3. Cake

Cake will last much longer when protected by pieces of white bread. They remove the moisture from the surrounding air, and it prevents the cake from drying out where it has been cut.

#2. Carrots

Carrots will last forever if stored in sand.

#1. Berries

When you buy fresh berries, place them straight into a bowl with water and vinegar (ratio 10:1). After five minutes, drain them in a sieve and let them dry. This kills off the small micro-organisms and makes the berries last longer.

Canning Vegetables

It's hard to say whether canning is a more common method of preserving food than drying. If you go into any grocery store in the country, you'll find a canned food aisle. But you won't find a corresponding dry food aisle. Even so, there is a lot of dried food in that grocery store; we just don't normally think of it in those terms. Oatmeal, rice, and other grains are all dried; even popcorn is. Moreover, we could say that breakfast cereal, cookies and potato chips are also dried foods, however they are cooked, dried foods.

Canning is an almost perfect method of food preservation, at least for wet foods. It not only provides protection from bacteria, but from insects and rodents as well. Drying, as we discussed in the last chapter, doesn't automatically provide protection from insects and rodents; you have to provide some sort of packaging which does that. But the can or jar used in canning does that as well.

What makes canning so effective is that it creates a hermetically sealed environment, where no live enemies of our food exist. While it is still possible for the food to be damaged by heat or for the seal to be compromised and the food damaged, as long as the container stays intact, there is little risk that the food stored inside will go bad.

As part of the canning process, all food that is canned is firstly pasteurized. This process requires raising the food's temperature to a minimum of 158°F (70°C) and holding it there for a minimum of 20 minutes to ensure that the food is heated all the way to its core. This temperature is hot enough to kill any bacteria

that is in the food, sterilizing it. Thus, there is no way that the food can spoil (decompose) as long as the seal on the can or jar is not breached.

It may seem a little confusing, but most home canning is done in jars, rather than cans. That's because the word "canning", which refers to a specific process of preserving food, existed and was in use before the invention of the can. The can got this name because it was invented for use in canning. But for home canning, you're probably going to want to use jars rather than cans. The main reason for this is the cost.

The cans themselves are cheaper than jars, assuming that you don't reuse the jars. But canning in cans requires having the right equipment to seal the cans. While there are manually-operated consumer versions of this equipment on the market, even those are fairly expensive. When you factor in the fact that you can reuse jars over and over again, only having to replace the seals, they are a much more cost-effective investment in the long run.

Before going on, let me clarify a misconception. If you buy canned foods in the

grocery store, they will have an expiration date on them. Actually, this is nothing more than a guarantee date. The cannery that produced that food is guaranteeing that it will be safe for consumption up until that date. After that, they don't guarantee that the product will still be good to eat.

But this doesn't mean that the food goes bad after that point; in most cases it doesn't. There are still cans of food floating around which were canned decades ago... and they are still good. As long as the can hasn't rusted and the seal hasn't broken, the food is still protected.

Recently, some canned food that was 100 years old was opened in order to see how the food had fared after having been canned for so long. While the texture and color of the food had changed, it was still edible. The only thing that might be a problem for canned food this old is whether any of the nutrients in the food oxidized, making the food less nutritious.

There is an exception, however, when discussing canned food lasting virtually forever. I am referring to non-pickled foods that are canned in plastic jars, rather than glass ones. There is something different that is done in this process which prevents the food from lasting as long. There aren't many foods that fall into this category. Some of these are applesauce and fruit juices. Applesauce in particular will begin to oxidize after about six months. So, while it is still safe to eat, it will not look the same.

The Canning Process

The freshest and best-quality food should always be used for canning. If you use food that is nearing the end of its "fresh" shelf-life, it will affect the quality of the canned food you produce. While it will still be edible, the flavor and consistency of the food will be affected.

Any wet food can be canned; vegetables, fruits and meats all qualify. They need to be wet foods, because the excess space in the can or jar will be filled with water. This is to prevent oxidation of the food. Perhaps you've seen home-canned fruit, where some of the pieces were sticking above the water level and became discolored. This is the oxidation process I'm referring to.

The food needs to be cleaned, cut and prepared before canning. In some cases, especially with meat, this includes cooking the meat before canning. Fruits and vegetables are usually blanched, rather than being cooked. In other cases, foods will be mixed together, or have spices added to them before canning. There are thousands of canning recipes available online which provide you with an abundant variety of ideas for what you can do.

Many of these recipes are old, having been passed down for generations. The US Department of Agriculture (USDA) undertook a major project long ago to determine minimum canning times and temperatures, as well as the need for adding salt or sugar to canned items. This data, which is available on the USDA website, is the basis for all of these recipes. Food canned according to these guidelines cannot go bad while in the can.

The canning jars themselves, with their lids, as well as the pot they are heated, in must be sterilized before canning. This is done by filling the jars with water and putting them in a water bath in the pot. Then the temperature of the water is raised to at least 158°F (70°C) to kill any bacteria.

The prepared food is put in the sterilized jars and the remainder of the space in the jars is filled with water. A small amount of room, called "headspace," must be left in the tops of the jars to allow the food and water to expand.

This varies depending on the type of food you are canning.

Food	Headspace
Jams, Jellies, Spreads and Butters	¼"
Pickles, Tomatoes and Fruit	½"
Non-pickled Vegetables	1"
Meats/Poultry/Fish	1" – 1 ½"

With the jars filled, the lids are placed on the jars and the rings loosely attached. These rings are there just to hold the lids in place through the canning process. They need to be loose enough to allow air to escape the jars during heating.

Heating time and temperature are critical parts of the canning process. Recipes you use for canning must provide this information. If you are unsure of the information provided in the recipe, check with the USDA website for accurate information about times and temperatures.

Once the jars have been in the water bath at the right temperature and for the right amount of time, the pot can be removed from the heat and the jars removed from the pot. Allow them to cool on a cooling rack before doing anything with them. Once cool, verify that the jars sealed properly by testing to see if the center of the lid is concave. If it moves downwards when you push on it, it is convex and did not seal. The jar will have to be heated again in the water bath so that it seals.

Pressure Canning

Pressure canning involves using a special pressure cooker, unsurprisingly known as a "pressure canner", to increase the atmospheric pressure and therefore the boiling point of water. This makes canning at a higher temperature possible, which is necessary for some types of foods, especially meats. This

higher temperature is necessary to ensure that all bacteria are killed.

Most references will tell you that you need to use pressure canning for all non-acidic foods. However, I have seen a wide range of recipes for canning non-acidic fruits and vegetables which did not require a pressure canner. My wife and I canned a considerable amount of home-made applesauce and apple butter before we ever had a pressure canner.

Nevertheless, I am not suggesting that you can without a pressure canner, unless you have specific information that it is safe to can the type of food you are canning without one. We have since acquired a pressure canner and use it for most of our canning.

Dry Canning

In the last few years, some people have been experimenting with pressure canning as a means of preserving dry foods. Rather than canning in a pot, the jars and their contents are heated in the oven set to a low temperature (most home ovens only go down to 200 degrees).

Theoretically, dry canning should work just as well for these foods, which are mostly grains and pasta, as normal canning does for wet foods. You can't use it for dry fruit, only for foods that are truly dry, like the aforementioned grains. Bacteria can't survive in this food, as there is not enough moisture in it. So, there is very little moisture content to be concerned about. However, there's still the possibility of insects, insect larva or insect eggs. So heating is still necessary, not so much to kill the bacteria, but to kill insect larva and eggs.

One of the advantages being claimed for dry canning is that you can prepare pre-mixed dry meals, such as soups, with all the ingredients mixed together, except water. This would mean grain or pasta, dried vegetables, bouillon, and even dried meat and spices. They can then be preserved, providing you with ready meals when the time comes. These become great survival rations.

To dry can in the oven, preheat the oven to 200°F (70°C) with a cookie sheet inside. You will probably need to remove the top rack. While it is heating, fill the jars with the food you are going to dry can and place the lids on the jars. Once the oven is heated, open it and place the jars on the cookie sheet. Leave the jars in the hot oven for 12 hours.

As with normal canning, you're going to want to check the integrity of the seal once the jars have had a chance to cool. Jars that did not seal properly can be reheated.

It should be noted that while this method seems like it would work well, it has not been used for as long as normal canning has, so there is no proof that dry canning will work over the long-term. If you choose to use dry canning, you are doing so at your own risk. For this reason, it would be wise to use other methods for some of your food as well, so that all your eggs aren't in the same basket.

Pickling

Although pickling and canning are actually quite different, they are normally categorized together, simply because most pickled foods are also canned. While canning is not essential for preserving these foods, it does provide an effective storage method for them, protecting them from insects.

What makes pickling unique is that it depends on changing the pH of the foods in order to create an environment which is inhospitable to bacteria. Vinegar is normally used for this, although some recipes call for a salt brine rather than using vinegar. In either case, the pickling process ensures that bacteria cannot survive in the food. The process of pickling also

modifies the foods that are being pickled, affecting their flavor and even their texture.

We are all familiar with “pickles”, which can be placed on hamburgers or eaten plain. But there are many other condiments which are pickled as well, even though we don’t realize it.

Ketchup, mustard, most meat sauces, and salad dressings are all pickled products.

There are even meat products which are pickled, such as corned beef, which was originally known as “pickled beef”, and pickled herring.

Pickling is a time-consuming process; not for the person doing the pickling, but for the food. Foods which are being pickled must be left in the pickling solution for a considerable amount of time, sometimes for days. In many cases, the pickled foods are canned in the pickling solution, allowing the process to continue.

Should you decide to attempt pickling, it is essential that you follow a recipe. Since it is the pickling process that preserves the food and not the canning process, it would be dangerous to reduce or eliminate an essential ingredient, such as vinegar or salt.

Canning

When I was a child, I spent my summers at my grandparents’ house in the Ozark Mountains. They had an enormous garden which was much larger than their house. Most of the fruits and vegetables that they grew ended up in jars, lining the walls of their garage. Canning ensured that they would always have a food supply even if the garden had an off year. Fruits, vegetables, meats and fish can all be canned if the process is done properly. I started my canning career by making sweet pickles and then expanded from there.

We have canned everything from tomatoes to peaches to bacon, and even venison. For any type of canning, you will need mason jars of appropriate sizes, lids, rings, and jar tongs for removing the jars from the hot water.

Fruits and vegetables can be canned using a large pot with boiling water.

Meats typically require a pressure canner in order to obtain a good finished product. It should also be noted that dents in the lids or rings can be an issue along with any nicks along the lip of the jar. If a good seal is not created, the food will not be safe to eat.

Canning is an art form that can take years and years to perfect. By adding sugar, salt, herbs, and spices, you can manipulate the flavor of the finished product in several ways.

For basic canning of vegetables, you will need to wash the jars, lids, and rings thoroughly. You will then need to heat all of those elements in a large pot of boiling water.

While still hot, add your prepared vegetables and liquids to the jar. Apply your lid and ring and submerge the jars in boiling water with at least one inch of water above the lid.

After 10 minutes, use the tongs to remove the jars and set them on a towel. Let them sit and cool for a while and then check to make sure the lid is sucked in versus bulging out. If the jar and lid do not have a good seal, you will need to try submerging the jar again to create a better seal.

Pressure-Canning Meats

Pressure-Canning Hamburger Meat

The 4th of July is famous for juicy hamburgers fresh off the grill. After an emergency or unplanned event, it's important for everyone's morale to still have access to traditional comfort foods if possible, even in times of crisis.

Incorporating home canned hamburgers into your long-term emergency food supply will ensure that the simple comforts of a home-grown holiday are safe at hand.

Home-canned hamburger meat can be a great addition to your long-term food stockpile, adding protein and flavor to your meals without requiring refrigeration.

Canned ground beef can last 3 to 5 years without deteriorating in quality, and can remain edible even longer.

The meat is pre-cooked and can be opened and eaten straight out of the can in an emergency, or heated and served as part of a quick everyday meal.

When you pop open the can, you'll have a layer of flavorful beef fat for frying, beef stock for a soup or stew, and ground hamburger meat for use in just about anything that calls for ground beef, like tacos or pasta sauce.

Since the beef is preserved in beef broth, it's ideal for use in a dish that can incorporate both the meat and broth, such as a chili.

Ground beef can be canned crumbled or as browned hamburger patties. Hamburger patties are more versatile, as they can be

removed whole and eaten as burgers, or crumbled when they're used.

Keep in mind that full hamburger patties often do not hold together well in the canning process, and you may have trouble removing them from the jar as a whole patty.

If you're hoping to have a full shelf stable hamburger to warm on the grill, experiment with different hamburger grinds and sizes to find a method that works for you.

Canning hamburger meat, just like canning any meat product, requires a pressure-canner.

Never can meat or recipes with meat using the water bath canning method.

How to Pressure-Can Hamburger Meat

Canning Pressure: 10 lbs. under 1000 ft elevation

Head-space: 1 inch

Processing Time: Pints – 75 minutes, Quarts – 90 minutes

Begin by browning the meat in a pan in small batches, with a little oil or fat of your choice. While the meat can be packed into jars raw, quickly browning it will greatly improve flavor and texture.

A 10-inch cast iron skillet can comfortably brown 1 pound of meat in 2-3 minutes, so work in batches until all the meat is just barely browned. Leaving the meat still a little raw is ideal, so that it doesn't toughen as it fully cooks in the canning process.

Season the meat to taste using salt and spices, but avoid using any recipes that include a starch or binders such as flour, eggs, or bread crumbs. These ingredients can affect the canning process and cannot be used.

A pint jar can hold 3/4 to 1 pound of meat for canning, and a quart holds 1.5 to 2 pounds of meat. Try to have enough meat on hand to completely fill your pressure-canner, as it's much more efficient to can a full batch.

Add water to your pressure-canner and bring the water to a boil. Generally, instructions say to add around 2 inches of water to the bottom, but this can vary based on your canner model.

Pack the browned meat into canning jars, pints, or quarts, leaving 1 inch of head space below the rim. Fill the jars with boiling stock or water, still leaving 1 inch of headspace.

Cap the jars with new, clean, canning lids, and attach a canning ring to each jar. The canning ring should be "finger tight."

If the ring is too loose, you'll lose fluid into the canner and have partially filled jars. If the lid is too tight, air can't escape and the jars have a small risk of breaking in the canner. Ideally, set the jar on the counter and tighten the lid as tight as it will go with one hand.

Once the band is tight enough that the jar itself begins to spin without the other hand holding it, it's called "finger tight."

This part sounds scary, but really, there's a huge range that's acceptable, just don't crank them down too tight.

Arrange the jars in your pressure-canner according to the instructions. If you have a large double-decker pressure-canner, be sure to insert the divider between layers and stagger the jars so that they're not directly on top of each other.

Seal the canner lid, and for a weighted gauge canner allow steam to escape from the valve for 7-10 minutes before adding the weighted pressure gauge.

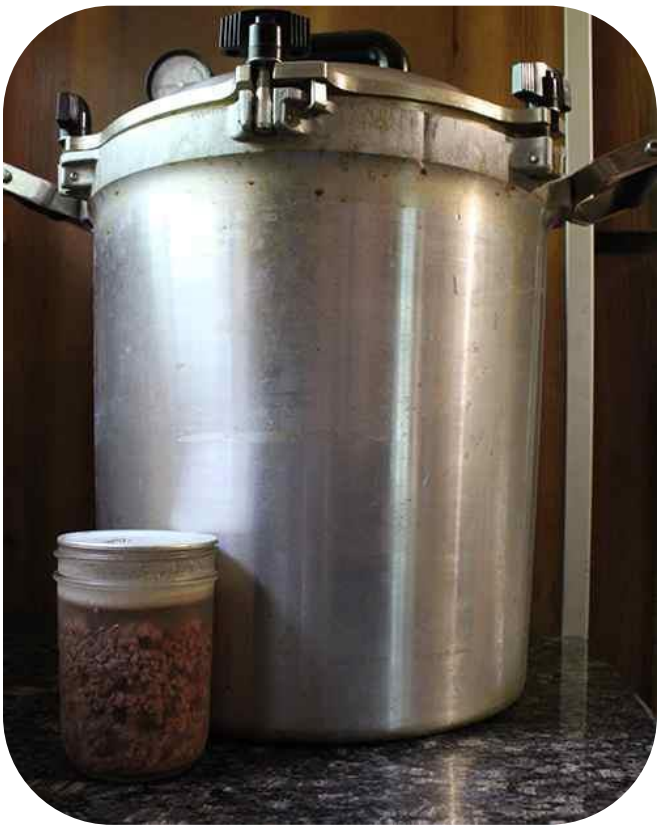
Use 10 pounds of pressure with a weighted gauge, or be sure to keep a dial pressure canner at or just above 11 pounds of pressure.

Once the canner is up to pressure, begin timing. For pint jars process for 75 minutes, and for quart jars process for 90 minutes.

When the processing time is over, turn off the heat and leave the canner in place until it is back down to 0 pounds of pressure. Once it's at 0 pounds, remove the weighted gauge to allow the last little bit of steam to escape before unscrewing the lid.

Remove the jars and allow them to cool to room temperature before storing. Be sure to remove the canning rings. Canning rings are only necessary during the canning process, and after the jars have cooled the vacuum from the seal itself will keep the canning lid sealed.

Leaving rings on jars in storage can result in the rings rusting shut.



While many pressure-canners can accommodate a half gallon jar, the USDA does not approve canning meat in half gallon jars and does not provide canning timetables.

While some online websites will give you instructions for how to "dry can" hamburger meat without using water or stock, this is not an approved method and will not guarantee food safety.

Above 1000 ft of elevation, canning pressure increases to make up for the lower atmospheric pressure at high altitude. For high elevation pressure canning instructions, see the "All-American Pressure Canning Instruction Manual."

How To Pickle Meats for Long-Term Storage

At least as far back as the 18th century, brining was a common way to preserve meat to make sure it wouldn't go bad. It became popular in the age of sail due to its ability to preserve meat for years, much longer than the short-term preservation of other methods.

Brined meet didn't have to be kept cold, and people could enjoy it all year round without having to go through any complicated processes.

Brining was a minimalist method for preserving meat back then, and is still used today for that very reason. Why fix what's not broken?

The simplicity of the process, as well as the availability of the necessary supplies, makes this method a popular choice among preppers, large families, and anyone who is tired of having their meat go bad before they were able to cook it. That's the upside.

The downside, if there is one, is that the salt content of the meat after it has been brined is quite high. People who need to cut back on their salt intake should use caution with brined meat. However, that doesn't mean they can't eat it.

Soaking the meat in plain water for an hour or so, then rinsing it before cooking, will help reduce the salt content. I like pork, and will be using pork for this chapter.

However, this process can be used for a variety of meats, including fish.

The Supply List

No need to write this down, because the list is very short and sweet. In its simplest form, you will only need:

- Meat
- Salt
- Container (glass or ceramic works well)
- Sharp knife
- One fresh egg, fully intact (for testing water only)
- **OPTIONAL:** additional seasonings.

I have additional seasonings listed as "OPTIONAL" in the above list. But if you are like me – someone who just can't seem to leave a recipe untouched – it's not much of an option.

There are several variations and combinations of seasonings which you could use, depending on what you like and dislike. Some suggestions are sugar, black peppercorns, bay leaves, garlic, or any of your favourite combinations, including Asian spices.

The Process of Brining Pork

Once you have the supplies, the first thing you have to do is make sure the container and meat are clean. Then proceed with the following steps:

#1. Cut the meat into cubes, about 1 or2 inches thick each.

#2. Rinse the meat well with water to fully cleanse it, and then set aside.

#3. Add enough water to the brining container of your choice, allowing room for the meat to be added later and be fully submerged.

#4. Add the salt (the amount will be determined by the size of container). For one canning jar, I used about 1 cup salt.

#5. Stir until the salt is dissolved.

#6. Test the water to see if it's salty enough by placing the egg in the water. If the egg floats, there's enough salt. If it doesn't, add enough salt until it does.

#7. Add the meat to the container, making sure it is fully covered by the salt water.

#8. If you are going to add additional flavouring, you can do it now. I added ⅓ cup sugar, 4 bay leaves, 3 garlic cloves, and about 20 black peppercorns. Keep in mind, I made a small batch.

A word of caution, however; even though it's been preserved, the meat is still raw. Make sure to cook it properly before consuming.

Pressure Canning Bacon

Canning bacon is an easy option for preserving your bacon for up to a decade, maybe even more. I'm not talking about expensive canned bacon you can buy at the store. I'm talking about fresh bacon, without any added preservatives or unnecessary ingredients, which quite honestly are better left undigested. Canning your own bacon is oh so right, on so many levels.

So, if you are in possession of a lot of bacon, there is no need to eat it all up in a rush before it goes bad, or let it go to waste. And you don't have to rely on a freezer, which can lose power on any given day, resulting in all your products having to be thrown out.

Canning bacon is easy and doesn't require too many items.

Supplies Needed for Canning Bacon

The majority of these items might already be in your home. If not, you can find them in pretty much any store. Here is what you will need:

- Bacon
- Unbleached parchment paper or masking paper
- Pressure canner (traditional or electric)
- Sterilized canning jars (wide mouth jars are best).

If you don't have a pressure canner, you can probably borrow one for this first batch. Test it out to see if this is something you would like to do again in the future. You might realize that you want your own pressure canner once you

see how easy it is to have good bacon on your shelf, immune to the risk of spoiling.

The most important thing to remember when choosing a canner for safely canning meat, is that it requires 10 psi, or 15 psi for high altitude areas (psi stands for pressure per square inch).

The Process of Canning Bacon

There are multiple variations of this process, but I found this one to be the easiest and most reliable. Before starting this process, in order to obtain exact timing and pressure settings, make sure to follow the directions for your particular canner.

Cut out a piece of parchment or masking paper, about 18" long, and lay it on a clean working surface.

Place individual strips of bacon along the paper, without layering them one on top of the other.

Carefully fold over the bacon and paper in half.

Roll the bacon and paper into a roll, as tight as you can get it.

Place the roll of bacon into the jar (this is where wide mouth jars are more convenient), without adding any other ingredient, not even water.

Place the lid and ring on each jar, and tighten gently.

Process the bacon jars in the pressure canner for 90 minutes, at 10 pounds of pressure.

Once the process is over, you will notice some bacon grease at the bottom of each jar. This is normal. See the photo below to get an idea of what it will look like.

The final step is the best. When you are ready to eat some bacon, open the jar, unroll the bacon, and cook up the amount you want to eat. Minutes later, you will be enjoying crispy and tasty bacon.

After the seal has been broken, place any unused bacon back in the jar and store in the refrigerator, just as you would with fresh bacon that has not yet been canned or frozen, generally for no longer than 1 week. Keep in mind that once the seal of the jar is broken, it's no longer safe to store outside the refrigerator or for long periods of time.

Various Ways to Can Bacon

If you want to change the above process a bit, it doesn't take much effort. For example, canning maple bacon is almost as easy as canning raw bacon. And who doesn't like maple bacon? Here is an easy way to have it on hand, ready to eat when you crave it:

- Cook the bacon
- Lay the bacon on the parchment paper
- Brush the bacon with maple syrup.

Then roll up the bacon just like you did in the raw bacon method, and follow the above directions for canning in the pressure canner to make sure the jars are sealed.

Another option is to can your very own bacon bits to use on salads, as well as additions to a multitude of dishes. Simply cook the bacon and crumble it. Place the cooked crumbles in pint jars, then use the pressure canner to seal the jars. You could have delicious bacon on your shelf, ready to eat or use in dishes, every day of the year. Forget about having to thaw frozen bacon, or not having any more precious space in the freezer.

Moreover, say goodbye to wondering if the bacon in your refrigerator will spoil before you can eat it.

7 Deadly Canning Mistakes Even Smart People Make

If you're ever forced to rely on your own resources for the long term, home canning is going to be an essential skill. You can't grow your own vegetables all year round; there's a growing season followed by a harvest season. When these seasons begin and when they end depends on the climate. Once you've harvested your crop for the year, that's it; there won't be any more until next year. To keep your diet healthy through the year, you're going to have to preserve for later use the bulk of what you've grown. The simplest way is by freezing, but what if power becomes unreliable? Even a few hours' blackout could spoil everything you have stored. The only reliable way to preserve your own vegetables is through canning, and that means it's a skill everyone should master.

Canning isn't a complicated process, and it doesn't need much equipment. As long as you have suitable jars, lids and a way to boil water, you're all set. What it does need, however, is attention to detail. If you're not careful, you could end up with food that will spoil in the jar, or become a deadly hazard.

#1. Principles of Canning

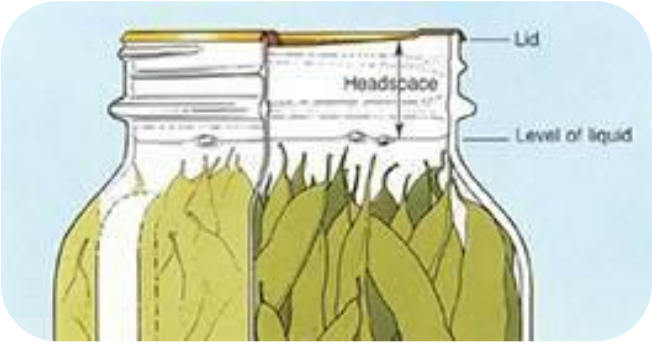
Food spoils because oxygen breaks down some of the nutrients it contains, and microorganisms grow and feed on it. Canning preserves the food by protecting it from both of these threats. If the food is inside the jar, and the oxygen and microorganisms are outside, so they can't get in to spoil it. Right?

Well, kind of. That's the basic idea, but it's not as simple as just getting a good seal when you put the lid on. There's always going to be some

oxygen trapped inside the jar, but if there's too much it could be enough to spoil the contents before it's all used up. Too much oxygen will also let bacteria or mold keep growing. It's essential to get as much air out of your jars as possible before you seal them.

Unfortunately, that can cause another, much more serious, problem. Most bacteria won't grow if there isn't enough oxygen in their environment, but there are a few that won't grow if there's too much.

Some of them are harmless, some will give you an upset stomach, but one of them is potentially deadly – and it grows like crazy in food that hasn't been properly canned.



This microbe is a bacterium called Clostridium botulinum. It's very common in soil, and is found all over the world. Most vegetables are exposed to the bacteria as they grow.

Normally this isn't a problem, though. In a normal environment, C. botulinum is dormant, because it can't grow if the oxygen concentration in the air is higher than approximately 2%. Put it somewhere where there's little or no oxygen, however, and it will start to grow rapidly – and as it grows, it produces a neurotoxin.

The common name for this is Botox, and it's what some people get injected into their face to get rid of wrinkles. But wrinkle treatment uses tiny amounts of highly diluted Botox, and here's why:

Botox is the most poisonous substance ever discovered – far more deadly than cyanide, rattlesnake venom or military nerve agents. An ounce of pure Botox will kill 175,000 people – and a fraction of a milligram in a jar of contaminated food is all it takes to kill you.

Properly canned food is safe from botulinum contamination – but do it wrong and you're playing Russian Roulette. Sooner or later, unless you take the right precautions, you'll open a jar that has a colony of C. botulinum growing inside.

If you notice the symptoms in time and can get to a good hospital, it can be treated easily enough – but in a SHTF scenario, you're dead.

When you're relying on your own resources, the only defense against botulism is to can your food properly and prevent the bacteria from getting a hold. The way to do that is to avoid these deadly mistakes:

#2. Canning Bacteria

The fewer the bacteria that go into the jar along with your fruit or vegetables, the lower the risk of a dangerous infection. That means you need to clean the food as well as possible before it goes into the jar.

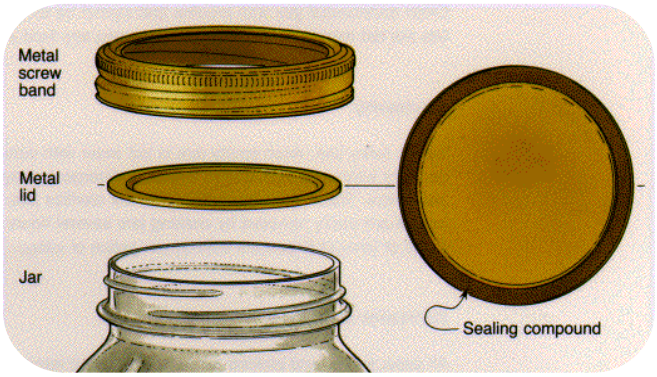
Anything that grows above ground should be thoroughly washed, but vegetables that are directly exposed to soil probably won't be clean enough even after scrubbing.

Peel them instead, to make sure all soil residue and bacteria are removed. Tomatoes should also be peeled. Blanching will kill many bacteria, so you can also do this as an extra safety measure.

Once you've cleaned your produce, don't recontaminate it. Jars, lids, and any utensils you're using all need to be sterilized. Clean enough for normal food preparation doesn't mean clean enough for canning.

When you're cooking dinner and a few bacteria slip through, it doesn't matter so much – they won't have time to grow. It's a different ball game when you're planning to store canned foods for months or years.

Even if there are only a few microbes when you seal the jar, there can be trillions by the time you eat its contents.



#3. Forgetting the Acid

C. botulinum grows best in a non-acidic environment. Acid slows the bacteria's growth, and can even destroy them. Unfortunately, most of the vegetables popular with home canners have a low acid content, making them more likely to host botulinum. Tomatoes are one exception; there are low-acid varieties too, but for canning you should avoid those.

With other vegetables, consider adding some acid to the mix. Vinegar or lemon juice are good options that can also enhance the flavor. You don't need to add enough to pickle the contents, but if you can push the pH of the liquid below 4.6, that will help a lot to with keeping your food safe.

With the exception of bananas and some varieties of apples and pears, fruits have a much higher acid content than vegetables. This doesn't eliminate the risk of botulism, but it does reduce it.

#4. Keeping it Cool

Heat is one of the most reliable ways to destroy bacteria, including C. botulinum – if you keep it at a high enough temperature for long enough. Fruit and tomatoes – acidic foods – can be safely canned using boiling water, because the botulism risk is low anyway. The same goes for other vegetables that have had acid added.

Simple boiling doesn't give any safety margin for less acidic foods, though. If you're canning meat or low-acid vegetables, the only way to ensure safety is by heating them to at least 240°F, and that means using a pressure canner. If you're canning without electricity, a pressure cooker can be used. A USDA-approved pressure cooker should boil water at 250°F, which gives you a good safety margin.

#5. Bad Seals

Check the seal on every jar before you store it. Press metal lids with a finger; if there's any

give in it, the jar isn't properly sealed. For screw band type lids, you should remove the band and pull gently at the lid. If it's sealed it will stay on the jar; if it comes off, refrigerate the contents or eat them right away.

#6. Sloppy Storage

Storing your canned food in the wrong place can quickly shorten its shelf life, lower its quality, and even make it dangerous. On the other hand, correct storage will preserve it and keep it safe.

Clear glass jars let light in, and that can discolor many canned foods. It's not a serious problem, but it does make them less appetizing. Store your jars somewhere dark – or, at the very least, out of direct sunlight.

Look for a cool place. Heat is essential during the actual canning process, but once your jars are sealed it becomes an enemy.

Temperatures above 75°F can make vegetables turn mushy, and they also encourage microorganisms to grow.

Dampness is also bad news. Glass is immune to it, but lids and screw bands can rust. It'll take a while for them to rust right through, but rusty edges can start leaking tiny quantities of air. That won't help botulinum, but there are plenty of other bacteria and molds that can spoil your food and make you ill.

#7. Forgetting to Check

Don't just open a jar of canned food and dig in with your spoon. Check the container before opening; is anything cracked or distorted? Do the contents look discolored? Are there any signs of leaks?

If you spot any of these things, throw the food away. When you open the jar there should be a rush of air as the vacuum inside breaks; if there isn't, then the seal might have failed, in which case the contents aren't safe. Also get rid of anything that spurts liquid or foam when you open it.

Any sign of mold inside the jar means it's either leaked or wasn't properly sterilized to begin with. The mold itself could make you sick, but it's also an indicator that bacteria could be – and probably is – growing in there, too. Throw it away.

How to Slaughter and Field Dress a Cow for Year-Round Meat

Before any slaughtering begins, the following is recommended for 24 hours leading up to it:

- Choose a healthy cow
- Stop the feed 24 hours before slaughter
- Do NOT stop access to water
- Keep the cow calm, to prevent issues with bleeding.

Pay attention to the upcoming temperatures, because nights below freezing will help the carcass to properly chill, with no need for refrigeration. If it's above freezing, the meat and carcass will need refrigerating.

Slaughter Preparation

Make sure the area you choose to do the slaughtering is dry, clean, and dust-free, such as a well-drained grassy area.

Everything should be clean before you start the slaughtering, chilling, and processing stages, including:

- Equipment
- Work Area
- Storage Area
- Clothing
- Hands.

Before you start, you should know that you can chill the carcass, without refrigeration as long as the carcass temperature doesn't rise above 40°F. The carcass should also hang in a clean and dry building, free from contamination and odours, while it's in the aging process.

Don't Let the Carcass Spoil

Here are a few causes of the carcass or meat spoiling:

- Improper Chilling – Internal temperature of carcass should be around 40°F, within 24 hours of slaughtering.
- Improper Freezing – Packaged meat should be frozen at 0-6°F, for up to a year.
- Poor Sanitation – The slaughtering, chilling, and processing areas need to be clean and dry.
- Odour Absorption – Any strong odors within the processing area, will most likely be absorbed into the meat.

Basic Equipment

You will might want, at minimum, the following items for doing your own slaughter:

- Stunning device (such as a 22-caliber rifle)
- Block and tackle hoist, or hydraulic lift
- Beef spreader (such as a tree with hooks, on both ends, and a center ring)
- Skinning knife
- 6" boning knife

- 8” butcher knife
- 24-26” meat saw
- Clean and cold water

As mentioned, this is the minimum you will want to have on hand.

How to Stun and Kill the Cow

This process should be done as humane as possible. If you choose to use a rifle, follow guidelines for firearm safety.
The targeted shot should be at the intersection of 2 imaginary lines from the right horn to the left eye, and from the left horn to the right eye.

How to Bleed the Cow (done IMMEDIATELY after cow drops)

Immediately after the cow is down, bleed it. Standing behind the cow, use a sharp skinning knife to slit the throat, from the jaw, through the carotid artery. The cow should now be brain dead and won’t suffer.

A cow holds a LOT of blood, so expect it to take at least a half hour for it to bleed out.

How to Skin the Cow

Use the following steps to skin the cow. With the cow on its back, take the following steps:
Remove forefeet and shanks (at the knee) by cutting through the flat joint. The hind legs should be skinned out at this step as well.

Holding the skinning knife on a flat angle, split its hide from the opening (the front of the brisket) to the midline of its belly, to the bung.
At the rear, split the hide by the hind of each leg (starting where the shank has been removed), going towards the udder (or scrotum) area.
Wait until the carcass has been hoisted to skin the hind outside (and front of legs).

For the siding step, glide your knife under the cut skin over its belly, grasping the loosened outer skin to pull outward and up.
Firmly place the knife against its hide, keeping the cutting edge slightly turned to the hide. Using long strokes, you can now remove the hide down the sides of the carcass.

Open the Carcass

If it’s a male, remove the penis before you start to open it. Once the skinning is complete, cut through the brisket center, then use a saw to cut through the breastbone.

There is a white, thick membrane covering each round muscle in the pelvis area. Use that as a guide to follow, which can help in avoiding a cut into the muscle. A knife could be forced between any soft cartilage joining the pelvic bone. If the cow is older, the pelvis may need to be sawed.

Now it’s time to hoist the carcass. Insert the hooks (of the beef spreader) into the hind legs’ s tendons. Once the carcass has been hoisted, you can finish skinning.

The bung can be removed by cutting around it, on both sides and back, then pull it through the pelvic cavity. Continue to pull both the bung and the intestines, while you cut the ligaments which attach the intestines to the back.
Pull on the paunch in order to loosen it from the carcass, then cut the esophagus, near the diaphragm, letting the paunch and intestines to drop.

Next, remove the liver, then the gallbladder.

Make sure the head is off the ground, then cut out the diaphragm in whole. Pull the heart and lungs down and forward to cut out the large blood vessel that is attached to the backbone. You should remove the esophagus, heart, and lungs as one item.

After it's completely skinned, the head should be removed. You can do this by slicing across the neck (through the atlas joint and above the poll).

The internal organs, and dressed carcass, should be examined for any abnormalities that could have a negative effect on the meat.

Splitting the Cow Carcass

The carcass should now be cut into two sides, by sawing completely through the sacral vertebrae. Do this from the inside. Once the cut is through the pelvis area, it would be easier to continue sawing through the back, making a split down the backbone's center, to the neck. To help with balance, leave the neck attached to the carcass.

Look for any excessively bloody, or soiled and bruised pieces of meat. To help drain blood from the forequarters, pump them (up and down) a few times.

Next, use cold water to help wash the carcass and remove dirt and blood.

The appearance of the carcass will be more appealing if you shroud it with clean and wet white muslin. Make sure the shrouding is tight and secure with ties or skewers. This step will help the exterior fat smooth out while it chills.

Age the beef before cutting it, using the following guidelines:

A carcass with a thin layer of fat – 3-5 days
Thicker layers of fat – 5-7 days
Fully covered in fat – up to 10 days
Any longer than these recommendations will increase the risk of unwelcome odors and even spoilage. Keep in mind, if the temperature of the carcass goes above 40°F at any time, the time for aging should be reduced. In fact, if you find that the temperature has risen above that, start the process of cutting up the meat.

How To Preserve Half A Pig For A Year Without Refrigeration

The techniques our forefathers used were simple and practical. I'm going to show you a curing recipe that I learned from my grandfather, who learned it from his father, and so on.

Curing the Meat

Get your meat ready. I will be curing approximately half a pig and a whole rabbit. However, this process can be done using any kind of meat, as long as you have a large amount of salt and a container. Make sure the meat is as fresh as possible!

Pour around 3/4 to 1 inch of salt on the bottom of the container and place the pieces of meat

inside, one by one. Make sure to rub the salt into the meat as much as you can.

You can also add more salt to the mixture, but don't overdo it.

The meat must be put in a fairly cool place in order for it to cure; the ideal temperature is somewhere between 43–46.5°F. Because of this, the process is best undertaken in winter or fall, when the temperatures are lower.

Let the meat sit inside the container with the salt for a few days. After one or two days have

gone by, the meat will start leaking juices. Using this juice, wash the salt off of the meat, and then salt it once more until you can barely see the meat.

Flip it twice a day for two weeks, then remove it and wash it off with its own juices once more.

Then grab an egg from the fridge. You will need it for the next step.

Making the Curing Broth and Letting the Meat Rest

Next, make a broth. This will cure the meat and give it the proper taste.

You'll Need:

- 4 gallons of water
- 2 ounces of garlic
- 13 bay leaves
- 15 pieces of allspice
- 10 cloves
- 4 tablespoons chili flakes
- 1 tablespoon Provence seasoning mix
- 4 tablespoons powdered paprika
- 1 small onion
- 3 tablespoons black pepper
- 1 teaspoon dried thyme
- 25 pieces of juniper berries or pine nuts
- 2/3 cups brown sugar (increases the effectiveness of the salt)
- 2 tablespoons ground coriander

Put all the ingredients (except the onion and the garlic) into a pot and boil them for half an hour to an hour. After that, let the broth cool, and then add the finely cut garlic, the onion slices, and the meat for curing.

I combined the juices from the meat and mixed them thoroughly into the broth for extra flavor. To test if your broth is perfect, you can use an ancient technique that involves the egg you got out earlier.

The perfect salt level for the broth can be checked by placing the egg into the mixture; only half of the egg should be submerged inside it. If you don't have a meat thermometer three-fourths of the egg should be out of the

water. Place the meat in the broth and leave it inside for two whole weeks.

Make sure all of it is completely submerged in the mixture. I've built this contraption to make sure it stays down.

I've also turned the meat over every two days to make sure it got treated on both sides.

After two weeks they ended up looking like this:

After taking the pork out of the broth, I grabbed some of the leftover mixture and placed it in a bowl for the rabbit meat.

I put the rabbit into the mixture. This works just as well with a duck or even a goose.

To keep it under the broth, I grabbed a plate, turned it upside down, and filled a jar with water to put on top of it. The difference in density between the water and the salty broth will make the jar float, but the weight of it will push it down just enough to keep the rabbit at the bottom. I left the meat inside the bowl for three days.

If you plan on preserving the meat for a shorter period of time (one to two months) you will need to make a new mixture for the meat consisting of a 6% concentrated salt water mix, made only with salt that doesn't contain any iodine.

Let it soak in this mixture for two days. If you think that it might be too salty for you, you can leave it for only one day, but then I'd recommend keeping it inside a fridge, because the less salty the meat is, the less it will remain preserved.

Once again, push it down so that it's submerged completely. The concentration of the mix and the dense concentration inside the meat will balance out until they are the same.

If you decide that you want meat that will last up to a year without having to be refrigerated or frozen, then don't bother making this mixture, or only leave it inside for 6–12 hours. Put this meat inside a dry and well-aired place until you want to use it. For example, you could use an out of service furnace or a chilly storage room.

The meat from this process will only be good for soups as its high salt concentration causes it not to be good for eating on its own. Before cooking, leave the meat in cold water for 12–24 hours, changing the water three or four times during this period; Afterwards it will be good for soups.

Warning: Even after letting the cold water soak up some of the salt concentration, the meat will most likely still have enough salt that you won't need to add salt to the soup.

If you made this kind of meat, then you're almost done. You've prepared a simple food that is perfect for survival situations. It's probably one of the best meat preservation techniques you will learn. Now you will only need to smoke the meat and you are ready to feast on your hard work.

Preparing the Pork's Back Fat

If you have some leftover pork back fat from the broth, it needs to be prepared in a different way to give it a pleasant taste when used.

Take the fat pieces and lay them out on a smooth surface. Leave them out for a day so they dry out a little.

I prepared some garlic and water, mixed them together, and covered all sides of the fat with the mixture except for the bottom side (the side with the skin).

I also covered them with paprika powder and rubbed it into the pieces of fat.

Then I added some more powder on the top until the fat wasn't visible anymore.

After smoking the fat, we will get a super food that, even without refrigeration, won't go bad during the hottest of summers. It's an incredibly delicious treat in a slightly frozen form.

With a little bit of bread and some onion slices, you've got yourself a great meal. But do watch out as this food hates diets. You can also thaw it and put it into different kinds of meals; it gives a wonderful smoky taste to any food.

Preparing the Meat for Smoking and the Process of Smoking

By this point, the meat's salt concentration has been lowered enough that you can take it out of the mixture and let it dry for 24 hours.

After all of the mixture that was still on the meat has finished dripping off, you can prepare it for smoking. For my smoking process I use two techniques to keep the meat above the smoke. I have hooks that can pierce the meat easily.

If you do not possess hooks like these or something similar, with the help of a few pieces of wood and few pieces of rope, you can solve your dilemma. With a knife, cut holes into the meat where you want it to hang from.

Tie a loop on a piece of twine and insert it into the hole.

Put a piece of wood inside the loop and pull it tight. This way you have a hole to hang the meat from that can be accessed easily.

With the pork leg, make two loops of twine and put them together; then put this around the leg and pull tightly to secure it.

Now it's time for the cold smoking!

I used beech tree sawdust. I aimed for simplicity and just filled a metal container with sawdust and then lit it up until I saw a little smoke.

Smoke the meat only during the day, and let it rest at night. Continue this process for three to four days.

If you decide you want to make the kind that can last for a year, leave it for five to six days.

This is what the finished meat looked like:

Put the meat into a cold and well-aired place for another week so that the taste sets in. Don't worry; I'll let you have a bite of this superfood.

With this information you can literally preserve any kind of meat you have in mind. However, if it's a thicker meat, like the pork leg, it needs to sit inside the salt and then the broth for another seven days in each.

How To Repackage Foods In Mylar Bags With Oxygen Absorbers For Long-Term Survival

Shelf life varies, depending on storage conditions and the type of food. You will usually see a range indicated for shelf life. For example, rice is listed as 15-30 years, however some sources estimate it to be 10-15 years.

Here are 19 more foods that will last for decades. Usually, this difference in shelf life is an indicator of the food's nutritional value. For example, after 10-15 years, the nutrients in rice will begin to break down. The rice is still safe to eat for 30 or more years if stored in the right conditions, but it may lose most of its nutritional value.

Dry foods will keep long past their expiration date if they are packed dry and oxygen is eliminated from the package. This means repackaging foods in sealed cans or mylar bags, and also using oxygen absorbers or a vacuum pump to get rid of all oxygen.

Many people use their food-saver type vacuum machines to remove the air, sealing the food in a vacuum tight bag and then placing the bags, along with some oxygen absorbers, into a larger Mylar bag.

Once vacuum sealed, the food will keep until you have enough to fill your Mylar bag. The vacuum seal method is a good method to use when buying small amounts at a time, but packing in Mylar bags with an oxygen absorber is best.

We will discuss the sealing process later.

When sealing food in large Mylar bags, such as the 3-6-gallon sizes, place the bag in a bucket or other appropriate safe food container before filling. The bag will need the support of the container sides for the filling and storing stages.

How To Use Oxygen Absorbers the Right Way

Oxygen absorbers can be used with Mylar bags, glass jars with a sealing gasket on the lid, and PETE plastic bottles with gasket-type lids. The container must seal completely in order for the oxygen absorbers to do their job.

Oxygen absorbers are better at removing oxygen than most vacuum devices, but may not provide the visual proof that many people expect. This is because air is only 20% oxygen, so the nitrogen and other components still remain in the bag after the oxygen is absorbed.

Many times you will see the Mylar bag contract around the food after a few hours, but do not be alarmed if it doesn't. As long as the

container is sealed, the oxygen absorbers will do their job.

Wait to open the oxygen absorbers package until the food is packed and you are ready to seal it. After opening, remove the number of oxygen absorbers that you will use within the next 30 minutes, then seal the remaining oxygen absorbers in a glass jar or a vacuum sealed bag.

DO NOT OPEN the individual foil-packed oxygen absorbers!

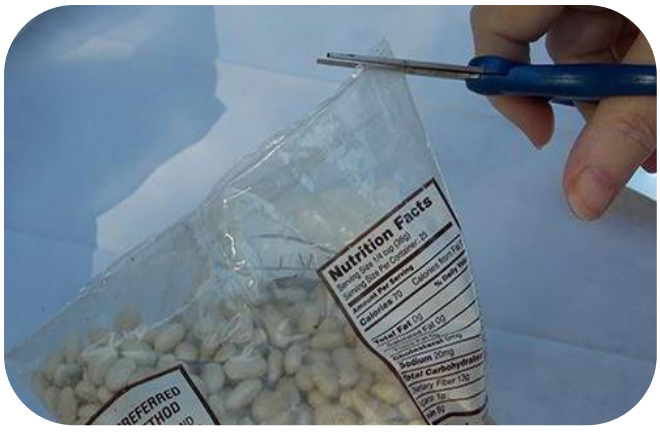
Packing Dry Foods in Mylar Bags with Oxygen Absorbers

Follow these steps to safely pack dry foods:

Pack foods while there is still a long time until their expiration date. Make sure they are completely dry. Choose the desired size for the Mylar storage bag you will use.

If you are using bags larger than 1 gallon, place them in a bucket for support. Clip a tiny corner off, or make a little slit in the food packaging, or remove it.

This allows oxygen to be pulled from inside the packaging.



Place the food in the bag. Do not overfill. Leave enough room for sealing.

Check the inside lip of the bag for small food particles that can interfere with the seal. Clean the inside of the bag with a dry cloth, if needed.

Add oxygen absorbers on the top of the food in the Mylar bag. DO NOT OPEN the individually foil-packed oxygen absorber; the contents are not edible.

Seal the Mylar bag with an impulse sealer for best results. If you are using an iron, check the seal thoroughly to be sure it is completely sealed. Label the bags according to their contents, also mentioning the date it was sealed on and a “use by” date.

If using buckets, seal the bucket with a lid and gasket. Store the sealed bags or buckets in a cool, dark, and dry place.

Store them off the floor, elevated on a shelf to allow air circulation around and under the

buckets or bags. Rotate foods, using them within their storage shelf life.

Suitable Foods for Drying and Long-Term Storage

Almost every food can be stored if you meet certain conditions. Meats and vegetables can be canned, dried, freeze dried, pickled, or cured.

Here is a list of foods that are suitable for dry storage. I also mentioned how long they will keep sealed in Mylar with oxygen absorbers and stored under good conditions:

- Whole hard grains such as buckwheat, dry corn, Kamut, hard red wheat, soft white wheat, millet, durum wheat, and spelt keep for 10 years or more.
- Soft grains such as oats, barley, quinoa, and rye, stored whole, will last 8 years or more.
- White rice keeps for 10 – 30 years stored in proper conditions. Use brown rice within 2-5 years. Brown rice contains oils which can go rancid.
- Corn keeps for up to 30 years or longer when stored whole. Cornmeal is good for 5 to 10 years.
- Dried potato slices, dices and flakes keep for up to 30 years, but may yellow a bit over time.
- Professionally dehydrated vegetables keep for 10 to 20 years, and freeze-dried fruits and vegetables for up to 25 years. Use home dehydrated foods within 2 to 5 years. Moist fruits such as raisins are not suitable for sealing.
- Sugar keeps indefinitely without being vacuum sealed or being stored with an oxygen absorber. Keep it dry, however, or you'll end up with a hard lump of sugar.
- Pasta keeps for 20 to 30 years.
- Powdered milk keeps for up to 20 years.
- Dried beans such as pinto beans, kidney beans, lentils, black eyed peas, lima beans, and other dried beans keep for 10 to 30 years, or even more. Beans keep well, but take longer to cook as they age. Older dried beans cook well in a pressure cooker.
- Flour, cornmeal, and baking mixes last 5 to 10 years.

How Many Oxygen Absorbers Should You Use? What Size?

Oxygen absorbers come in various sizes, depending on the number of CC's of oxygen that they will absorb. Once again, size recommendations come in ranges, because some foods have more spaces around them that retain oxygen. Densely packed rice will harbor less oxygen than pasta, which is packed loosely and has holes running through it. Use the recommended cc's for your bag size, taking into consideration the maximum possible amount of oxygen still left in your porous and loosely packed foods.

For 1 to 2-quart glass jars and mylar bags use between 100 and 300 cc's, depending on the food density. Gallon containers need 300 to

500 cc's. For 5 to 6-gallon buckets lined with Mylar, use 1500 to 2000 cc's.

If the recommendation is for 1000 cc's of oxygen absorbers, you can use one 1000 cc absorber, two 500 cc absorbers, four 300 cc absorbers or any other combination that adds up to 1000 or more.

Notice that when using 300 cc absorbers, three would only give you 900 cc, so you need to add a fourth, even though you exceed the minimum recommended amount.

So, What Are the Right Conditions? Storage Life Depends on Four Variables:

- **Temperature:** Heat is your enemy. Foods break down faster at higher temperatures. Store your long-term food products below 75°F (24°C) whenever possible.
  If you must store foods at higher temperatures, rotate them more often to ensure nutritional quality.
- **Moisture:** Foods must be completely dry before packing. Don't package them on extremely humid or rainy days.

If moisture levels exceed 10% inside the air-tight packaging, there's a higher risk that the foods will spoil.

- **Light:** Mylar bags do an excellent job of keeping out light, but foods stored in clear PETE bottles or glass jars need to be stored in a dark room or cupboard.
- **Insects and Rodents:** Freezing products for a day or two and then allowing them to warm up again before sealing them kills insects and eggs that may be present. Whenever possible, store sealed packages in rodent-proof containers such as metal cans which are safe for food storage.

Empty popcorn tins do a good job of keeping rodents out. Check your storage areas for signs of rodent droppings and act quickly if you suspect an infestation.

- **Signs of Spoilage**

Always check foods for signs of spoilage before and after opening. Before opening, look for bloated bags or cans. If a Mylar bag has blown up like a balloon, discard it without opening. This can happen if there was too much moisture in the food when it was sealed.

After opening, look for signs of mold or spoilage of any kind. Some foods, such as rice, dried potatoes and grains can yellow slightly over time, but are still safe to eat. Dramatic changes in color may indicate spoilage. Also give food the sniff test. A strange or unpleasant odor is also an indication of spoilage.

One of the most important rules regarding long-term food storage is to know the shelf life of your foods and rotate them so that you always have a fresh supply. This doesn't mean that you should waste food, but rather rotate your oldest food stores into current use and package new purchases for long-term storage.

DIY $20 Survival Food Bucket

If you're just getting started with your stockpile, a homemade $20 emergency food bucket is a great way to obtain a lot of food quickly without spending a lot of money. Pre-made bucket kits can sell for as much as $200 online, but with a little bit of time and forethought, you can build one yourself for a tenth the cost.

A single 5-gallon bucket can hold a month's worth of food for one person. Imagine a month's worth of food security, shelf stable for 25 to 30 years, all with only a small investment of time, money and space. Easy enough. Here's how to get started.

Choosing the Right Food

Your bucket will only last as long as it's most perishable ingredient. Start by choosing foods that have a long natural shelf life and are calorie and nutrient dense, so that they take up minimal space. While whole grains like brown rice may be great for your health, they contain natural oils that go rancid after about 6 months of storage.

Most people assume that white rice is all starch and empty calories, but a single pound contains roughly 1,650 calories and 32 grams of protein. An average adult needs 45 to 60 grams of protein per day, so that pound of rice is not just a great source of calories, but also provides at least half of your daily proteins.

Rice is a great foundation, but for a balanced diet you'll need beans as well. Beans and rice eaten together provide you with all the proteins you need. These two items alone, contained in your one-month survival bucket, also cover your entire nutrition requirements.

While that may sound bland, know that there are literally dozens of varieties of both beans and rice that are inexpensive and easy to come by. Choose a variety you're familiar with and enjoy.

Balancing Costs and Quality

While it may be tempting to buy the very cheapest option available, keep in mind that if you find yourself actually consuming the contents of your bucket in an emergency, you may regret buying that cheaper option just to save a few pennies.

If you shop around, you can find options that are both cheap and tasty.

Spend a few minutes in the bulk grain isle of a warehouse store like Costco or Sam's Club and you'll notice that there's a pretty big variation in price depending on variety. Bargain basement white rice sells for as little as 30 cents per pound, but choosing something with a bit more flavor, like basmati or jasmine rice, increases the price to around 50 cents per pound, and a few options sell for as much as 80 cents per pound.

A 5-gallon bucket can hold between 30 and 35 pound of rice, so choosing a 25 pound sack of mid-grade rice at 50 cents per pound sets you back about $12.50, but almost fills your bucket, leaving you with some money to spare for other essentials such as beans, salt, and comfort items like drink mixes. You can also choose to go with the cheap rice at 30 cents per pound, and buy nicer beans instead. It's up to you.

Long-Term Storage

Proper storage is key to ensuring your food is in good condition no matter when you need it. Even foods that have a long natural shelf life need a little help to stay fresh as long as possible.

In an ideal world, you'd seal your food, packed along with oxygen absorbers in mylar bags, inside a 5-gallon bucket with a strong gasket around the rim. Vacuum sealed bags with oxygen absorbers are also a good choice. A good seal, and removing available oxygen, are the things which ensure a super-long shelf life.

If you're hoping to bring your costs down even more, you can skip the mylar bags and the well-sealed buckets, but know that you'll need to update your inventory more often to keep things fresh.

My family chose to invest in gamma seal buckets which have a strong seal and, unlike mylar buckets, are reusable and resealable.

If you are using oxygen absorbers in your bucket, with or without mylar bags, add enough for 2000 or 3000 cubic centimeters of space. The air volume will vary based on how

dense your food is and how much space remains occupied by air. Only for the rice you'll need 2000 cubic centimeters, so in a mixed bucket you'll need to budget a bit more.

Packing a Survival Bucket

A pound of rice has about 1,650 calories and 32 grams of protein. Beans are almost as calorie dense as rice, with roughly 1,550 calories per pound, but contain 98 grams of protein. Be biased toward rice to ensure you're getting as many raw calories as possible.

In my bucket, I've added:

- A 25-pound sack of rice
- 8 lbs of beans
- 1 lb salt

That's it. In a pinch, that's all you'll need to survive, and enough salt to last you much longer than the beans and rice, if you're trying to extend the time your supplies will last.

Other Considerations

Water Purification – While some survival buckets will include something to purify water, when you're packing beans and rice, you're assuming that you will have a fire to cook them on and a pot to boil water in.

Beans take between 1.5 and 2 hours to cook, so you'll need a bountiful source of fuel. With that in mind, since you're assuming you'll have a lot of fuel anyway, it's easier to just pack more food and assume you'll boil your water.

If you really want to have something for quickly purifying water, don't choose bleach or pool shock, because you'll have to wait at least 24 hours to drink the water. Try iodine tablets, which are easy to use, provide iodine, and sanitize water for immediate consumption.

Fire starters – Since you'll need to cook in order to utilize your bucket, it's a good idea to have some way to start a fire.

If the electricity is out and you're bugging in, a propane stove will still work, as long as you have a way to ignite the burner. If you end up stranded, away from your home, a simple fire-starting method will come in handy to cook your emergency food.

Cooking Utensils – A stainless steel cooking pot, properly nested in with the rice, won't take up much space in your bucket and will ensure that you have a good pot to use with your food stores no matter where you find yourself cooking.

Also include a well-fitting lid and a spoon, both made of stainless steel.

Shelter – A reflective survival blanket or poncho also doesn't take up much space, and might just save your life if the weather is particularly bad. It can also be used for obtaining some shade in the desert.

Consider the climate in your area and think about any small items that may help you survive in a pinch.

How To Keep Eggs Fresh For A Year Using Isinglass

There are many ways of preserving eggs if you're fortunate enough to have a glut of them, but by and large, each method has its shortcomings.

Pickling eggs when all your girls are laying in the summer offers tasty and reliable results, but this method implies cooking the eggs, and the strong pickled isn't ideal for too many dishes.

So what's the best way to preserve fresh, raw eggs?

An old method of preserving eggs, that might have fallen out of favour, but which is still fondly remembered by many, is preserving eggs in isinglass. Extracted from the dried swim bladders of fish, isinglass is a form of collagen. With a long history of being used for fining or clarifying in wines, this natural substance can be used to coddle fresh eggs in a jelly-like substance, giving them a shelf life of up to a year.

It's not even a complicated process. With a short list of ingredients and little necessary equipment, you can easily add isinglass preserving to your list of food prepping skills.

You'll need:

- Fresh eggs, wiped over and not washed, shells intact
- Isinglass (you can buy online or at a homebrew store)
- Deep, sealable pot/jar/crock, washed thoroughly in soap and hot water

Method

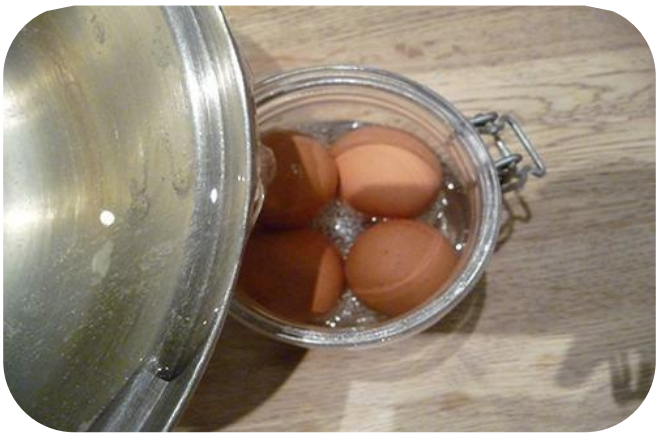
Shred/cut the isinglass and warm in a pan of water until completely dissolved.

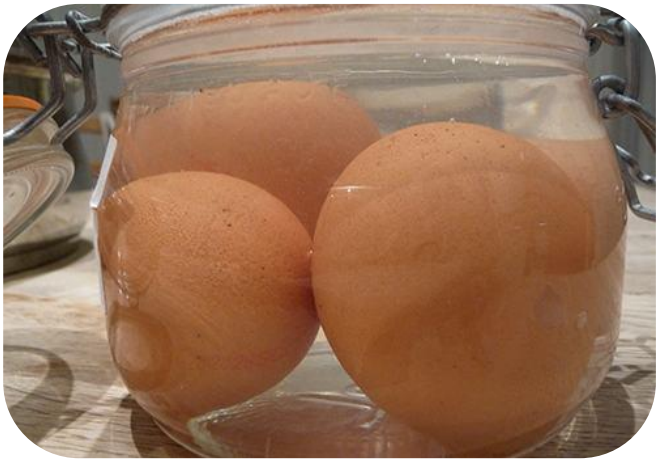
Check the packaging for quantities and work according to the instructions (they may vary).

Allow to cool.

Gently place your clean eggs, pointed end down, if possible, into the crock. We've used a glass preserves jar for the purpose of this guide, but an opaque one is better for long-term storage.

Pour the isinglass into the crock, making sure that the eggs are completely submerged.





Allow the isinglass to obtain a slightly loose, jelly-type consistency before placing the cap or sealing on the container.

Store and Use Eggs as Needed.

You can make your own mind up on this, but some people say that eggs preserved in isinglass can taste a little 'chalky.'

However, their taste improves greatly if you use the eggs in a recipe or flavor them with herbs and the like.

That's arguably a small price to pay for being able to preserve fresh eggs in pantry conditions.

Keep your store of isinglass eggs in a cool, dark place and remove each egg from the pot as needed. Kept in this way, expect a shelf life of 6 to 12 months. It's worth noting that the shells may become more fragile as you approach the sixth month.

If one of your preserved eggs hasn't stored well and smells bad, it might be due to a hairline crack in the shell.

Don't fret about it. Ditch the bad egg and try the others – one spoiled egg won't affect the remaining ones.

Preserve Eggs with Mineral Oil

A lot of the egg substitutes out there are good for baking, but what about when you feel the urge to stick them between your toes, or want to egg someone's house? The egg substitutes just aren't the same.

So, if you want to make sure you are never left without eggs, don't worry, you can preserve eggs with mineral oil!

Preserving Eggs with Mineral Oil

#1. You will need:

- Eggs – You want clean eggs, and the fresher the better!
- Mineral Oil – Usually found in the drugstore next to Pepto Bismol.
- Gloves – You want to be careful not to get this stuff on you! (mineral oil can cause estrogen issues in women, so be extra cautious).

#2 Oil Eggs

- Warm 1/8 cup oil in the microwave for about 10 seconds. (this amount is enough for about 2 dozen eggs)
- Dry the eggs and the carton.
- Put your gloves on!
- Rub a little oil in your hands and then grab an egg.
- Coat the entire egg with oil. It doesn't matter how thick or thin the layer of oil is.
- Make sure not to leave any exposed areas. Completely cover the eggs with the oil!

#3 Place Egg in Dry Carton

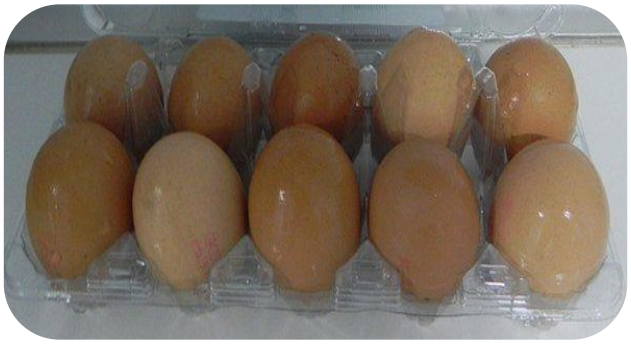
- Once the egg is all lathered in oil, make sure to place it in the egg carton with the sharp end down! Not sure why, but just do it!

#4 Store

- Short-Term Storage (up to 3 months): Store at regular temperature.
- Long-Term Storage (about 6-9 months): Store them in a cool, dark area – Ideally between 65-68 degrees & 75% humidity.
- Extra-Long Storage (9-12 months): Store in Fridge.

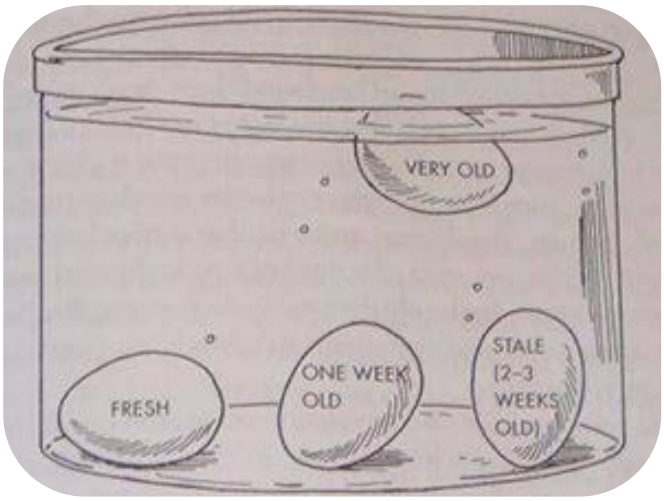
#5 Flip Weekly or Monthly!

- Once a Week, Month, or whenever you remember, make sure to flip the entire egg carton gently upside down to help maintain the egg yolk.



How Do I Know if the Eggs Go BAD?

- Use your nose! You will pass out!
- Play the Sink or Float game!
- Sink = **GOOD**
- Float = **BAD**



Benefits:

Besides the benefits I mentioned earlier, here are some other great reasons why you should know how to preserve your own eggs:

1. **Emergencies** – If your power goes out, you won't have to worry about becoming vegan!

2. **Sales** – When eggs go on sale, you can score big!

3. **Space** – Sometimes you just need some extra fridge space, and by kicking the eggs to the counter you will free some up!

What To Do With Your Frozen Food If The Power Goes Out

Freezing food is a great way of preserving it. If you can keep food at 0°F or lower you can delay spoilage for months or even years. And best of all, frozen food keeps most of its taste, texture and nutritional value. In fact, your freezer would be the ultimate prepping tool but for this one thing – it needs constant electrical power to keep running.

Many preppers have a generator, or some other replacement power source lined up, ready to take over if the main power goes out in a crisis. However, you still can't guarantee that you'll be able to keep your freezer running indefinitely. In fact, you don't even have to wait for a crisis. What if there's a power outage while you're at work, and you come home to find that the freezer's been off all afternoon?

This has happened to most of us at some point, but unfortunately, a lot of people – even preppers – don't know what to do next. Does everything in the freezer have to be thrown out? Is it OK to just power it back up and let the contents freeze again? Or can you keep some things, but not others? Here's what happens in your freezer when the power goes off, and what you should do about it.

Power Goes Off

The inside of your freezer stays cold through a combination of active heat removal and insulation. When the power goes off, the cooling pumps shut down, which means you're now relying only on the insulation. Don't

panic, though – the insulation can still keep the interior of the freezer below 40°F for up to three days, even in summer, as long as you keep the door closed.

When you open your freezer, heavy cold air will spill out the bottom of the door and will be replaced with warm air drawn in from the top of the door. Normally that isn't a problem. The coolant pumps would kick in, and within a few minutes the warm air would become as cold as the air it replaced. With the power out, it's a different story. The warm air will still cool down, but it will do so by warming up your food.

Basic physics says that heat will flow from a warmer body to a cooler one, until their temperatures are equal. Inside a powered-down freezer it flows from the warm air that just came in through the door to the frozen food, until the air and the food both have the same temperature. Of course, air doesn't hold a lot of heat, especially in comparation to frozen food, but in summer, the air in your

kitchen can easily be 80° or 90°F hotter than your collection of frozen steaks. This means that opening the door just once can raise the temperature inside by several degrees.

Even if you don't open the door, heat will still be flowing from the air to your food. The insulation on a modern freezer is good but it isn't perfect, so some heat will still make it through the walls. That warms up the air inside, which circulates, slowly warming up your food. The more air there is circulating in the freezer, the quicker your frozen items will warm up.

One way to keep your freezer cold as long as possible if the power goes off is to keep it full. If there's less air and more food, the food will soak up less heat from the air. If you don't have enough food to keep the freezer well filled, try filling old soda bottles with water and freezing them.

If the power goes out, they'll soak up massive amounts of heat. If the power doesn't go out, you can cut the plastic bottles, smash the ice, and use it to chill your beer. You can also fill any spaces with closed cardboard boxes. That's not as effective as more food or water, but it will cut down how much air circulates (and escapes) when you open the door.

What Food Should You Keep?

Anyway, let's say the power went off and your freezer warmed up, but now you've got it running again. Now what? How much of the food that was in it can you keep, and what's now a health hazard? Well, a lot of that depends on how warm the freezer got and how long it was left like that. If the food was kept below 40°F for a maximum of two days, or still has ice crystals in it, it should be safe to refreeze. If the inside of the freezer reached 50°F, everything in it needs to be used immediately (unless it's already spoiling), or else thrown out. That still leaves some questions unanswered, so here's a handy guide:

• **Fish** and **seafood:** These foods go bad very quickly, and they can become harmful to eat even if they still look fine. If any kind of seafood has thawed out, discard it. If there are still ice crystals throughout the package – not just a few in the middle, surrounded by a mush of defrosted prawns – it's safe to refreeze or eat immediately.

• Once **vegetables** have thawed, bacteria can grow on them very quickly. Like seafood, only refreeze them if there are ice crystals throughout the package. If there's no ice left but the vegetables still feel cold you should be able to use them immediately, as long as you cook them well. Canning is also an option, if there's too many vegetables to eat immediately – but be very careful with the temperatures, because you need to be certain that any bacteria are killed.

• If thawed **fruit** isn't visibly spoiled, and tastes normal, it can be safely used or refrozen. If it started to ferment, it should still be safe to eat, but might not taste quite right. You can still use it for cooking, though, as long as it doesn't actually taste bad.

• **Ice cream and dairy**: Once dairy products have thawed, they shouldn't be refrozen. Cheese should be OK to use. You can extend its life by coating it in wax. Milk and ice cream should be disposed of. They're perfect breeding grounds for bacteria.

• Check every package of **meat and poultry**. If a package has been left above 40°F for more than two hours, get rid of it. If it's still cold to touch you should be able to use it if you cook it

immediately. Don't refreeze poultry that's thawed out. Other meat that was kept below 40°F should be safe to refreeze.

• **Frozen dinners**. If frozen ready meals have thawed, don't refreeze them. If they still feel cold, cook and eat them immediately. If they're at room temperature, throw them out.

Regarding your freezer, the elementary thing to do when the power goes out is, obviously, to keep the inside of the freezer below 40°F for as long as possible.

Do that by keeping the door shut, sheltering the freezer from direct sunlight, and insulating it as well as you can. Wrap it in blankets and quilts, and if you can fit a layer of wadded-up newspaper around it, that's great too. If you can get your hands on some dry ice, put a block on the top shelf. The cold gas it releases will sink down through the freezer, cooling the contents along the way, and thus extending the life of your frozen products by several hours or even days.

Besides following this advice, always apply the basic rules of food safety. If something smells funny, or if it looks like it's starting to change color or spoil, get rid of it.

When in doubt, chuck it out. It's never worth risking food poisoning, especially in a crisis situation. However, if you can safely salvage any food after a power failure, you should certainly do it, and now you know how.

50 Foods To Dehydrate For Your Stockpile

Our modern food system relies on trucks.

It relies on shipping and the ability to get trailer loads of products into supermarkets and retail stores. So, what happens if something impedes those deliveries? Just how long would the people around be able to survive with no more goods rolling in?

The common belief amongst preppers is that we are merely 9 meals away from collapse. Three days of breakfast lunch and dinner would place the average person in a dire situation. After those three days, the stores would be picked clean. The best way to avoid this risky scenario is to stop relying so heavily on this commercial source.

The only way you can find true food independence is by growing more of your own food. Of course, that presents problems, too. There is a growing season when the foods are ripe and delicious and then there is a season when things are exactly the opposite. That's where dehydrating comes in.

Here are 50 foods to dehydrate for your stockpile:

Fruits

Perhaps one of the best snacks you can get your hands on, dried fruits are the perfect thing to grab for when you are trying to avoid bad snacking habits.

- **Apples**. Few things dry as well as apples. Now, there are several ways that apples can be dried. If they are merely dehydrated, they will be a bit chewy, but

if you, they will get some of their crunch back.

- **Strawberries**. These little morsels dry well, and they are great to rehydrate and use for topping sweet treats.
- **Blackberries**. If you combine those strawberries with some freeze-dried blackberries you will have a great snack that travels well and can be combined with granola.

- **Paw Paw.** The Paw Paw is a tropical fruit that grows right here in the United States. They grow as far north as

Virginia and they are like a cross between a banana and a mango. The Paw Paw has big seeds, but they can be halved and removed.

- **Bananas.** Probably one of the most notable dehydrated foods. Be careful when you purchase these bananas. Some of them are coated with a light sugar glaze. This helps with shelf life but adds unnecessary sugar.
- **Pears**
- **Figs.** Figs dehydrate well, and their unique flavor is intensified by the process.
- **Plums**
- **Pineapple.** Pineapple is another dehydrated food that can be coated with unnecessary sugar. Look for the best quality products you can find or dehydrate them yourself.
- **Papaya**

- **Grapes.** Who could live without raisins? By drying grapes you will obtain these shrivelled little delicacies.
- **Fruit Leather.** Pureeing fruit and dehydrating it on a pan will create a delicious dried fruit leather which is easily carried and stored. This will also save you some Mylar bags, since you won't have to pack the bulky fruits in them.

Vegetables

Dehydrated vegetables may not be as great a snack as the dehydrated fruits, but they are still delicious.

- **Green Beans.** Though they can never be as delicious as a fresh bean off the vine, these dehydrated beans add color and flavor to anything.
- **Celery**
- **Onion.** One of the base ingredients in most meals, the dehydrated onion is a great ingredient to have around. Diced and dehydrated onions are an important thing to store for many uses.
- **Carrots.** Carrots are a great little snack in their fresh form. They are also another base ingredient that makes up the French vegetable base called mire pox. Having them dehydrated in diced form is very convenient.
- **Broccoli.** A powerful vegetable filled with sulforaphane and calcium, broccoli is a terrific addition to any meal. It's a staple in most home freezers, so it would make sense to have some dehydrated as well.
- **Peas**
- **Asparagus**
- **Tomatoes.** There are few things as delicious as a fresh tomato. While dehydrating them doesn't preserve that

same flavor, I assure you that what you dehydrate from your fresh garden tomatoes is better than any hothouse fresh tomato you can get from the supermarket.

- **Peppers.** Peppers are one of those vegetables that do not store well. You can grill them and freeze them or roast and peel them. I think diced, dehydrated peppers are a great way to have them on hand year-round.

- **Okra.** Dehydrated okra is such an incredible snack. It also grows like crazy!
- **Mushrooms.** Dried mushrooms have been used as medicine for thousands of years. If you grow your own mushrooms, one of the best ways to store them is by dehydrating them.

Herbs

Herbs are an important thing to have around both for flavor and for medicinal purposes. The best thing about dried herbs is that they dry with just a little sun, or by simply leaving them on a dry counter. I like to pick them and hang them upside down.

- **Rosemary.** One of the most effective and powerful herbs, rosemary dries well and, as an added benefit, it also smells great when you burn it. Cubans burn it in order to rid a room of evil spirits.
- **Basil.** This is one of the very best herbs to cook with. I cry a little each year when the first frost kills my basil plant.
- **Lavender.** Dried lavender is an incredibly relaxing herb. You can dry it and put it into teas or even soaps.
- **Thyme.** By far my favorite herb to cook with, thyme is also a powerful anti-bacterial.
- **Sage**
- **Lemon Balm**
- **Chamomile.** A great sleeping aid, you can add this powerful dried herb to your tea.
- **Yarrow Root.** Dried yarrow root, when powdered, is great for stopping bleeding.
- **Rose Hips.** Filled with Vitamin C, the dried rosehip can help boost your immune system.

Roots

The properties that roots have is amazing. I have chosen some very powerful roots to highlight how dehydrated roots can be of use.

- **Ginger.** Ginger has a powerful flavor which can be used for cooking. It's also packed with healing properties. When I am feeling under the weather there is nothing better than a cup of ginger, dried cayenne, and honey tea.
- **Turmeric.** Nature's anti-inflammatory (turmeric) has been rediscovered as of late; people are still treating themselves with it to this day. It's a great root to dehydrate and even to powder.
- **Dandelion.** Many people don't know that the root of the dandelion can be

roasted and ground to make a drink similar to coffee. It does not contain caffeine, but tastes great.

- **Echinacea.** The powerhouse of the immune system, the echinacea root can be dried and used in tea during flu season.

Protein

You have got to have protein in your diet, regardless of whether you are talking about a survival situation or day-to-day life. Here are three examples of protein that dry and dehydrate well.

- **Duck Breast.** Salted and dehydrated duck breast turns into something like ham. It's delicious.
- **Beef.** Beef jerky.

- **Fish.** Smoked and dried fish have been helping mankind survive for thousands of years. With the technology we have today, fish can be smoked and dehydrated, thus obtaining a great meal that you can eat later. I like to use smoked and dehydrated fish in chowders during the wintertime.

Powders

By dehydrating foods, you have the ability to run them through a spice grinder, thus making powdered versions of these powerful ingredients.

Powders are great for adding to foods, teas and even for taking as medicine.

- **Cayenne.** A well-known anti-inflammatory, this powder is great for foods and for dealing with things like inflamed sinuses and even mild pains caused by inflammation.
- **Onion**
- **Garlic.** Garlic and onion powder are wonderful additions to your culinary toolkit. They add great flavor to food and store well.
- **Ginger.** Powdered ginger is one of those all-purpose powders that you simply must have around.

When I am not feeling well, I always add ginger to my tea. I even add it to my pumpkin pie, and it also forms a great combination with other spices.

- **Herb.** Powdering herbs is another terrific way to add their essence to your food or to your overall health program.

I like to make herb mixes in powder form. Herbs de Provence is a mix of lavender, thyme, savory and rosemary. It's a wonderful mix to add to tons of things.

Meal Makers

Homemade Pasta. Have you ever made homemade pasta? It's incredibly simple. It's also delicious.

You can dehydrate your homemade pasta to prolong its shelf life.

Cheese

Potatoes. Cooked and dried potatoes can slash the usual preparation time for these starchy staples.

Sauces. Powdering sauces gives you the option to begin packing up your own meals on the go. This allows you to create flavorful camping meals that you can rehydrate out in the wilderness.

Rice & Beans. Rice and beans that have been cooked can be dehydrated, so that they can be carried and reheated efficiently. If you use brown rice with your beans you will be getting some serious nutrition using just two ingredients.

Start Building Your Dehydrated Stockpile

Rather than investing in foods that have been sourced and processed in areas and facilities that are unknown to you, start building a dehydrated foods stockpile of your own.

By growing your own food, dehydrating it and storing it, you know everything about the food that your family is eating.

Amaranth Superfood – Storing And Using It For Survival

Amongst the variety of different grains out there, there are many which we don't really know. Surprisingly, some of these were cultivated and eaten by ancient people, but in time, this knowledge has become lost. Yet some of these grains are making a comeback as the younger generation begins looking for new foods to enjoy. Amongst these is Amaranth.

Amaranth is actually not one single grain, but a group containing more than 60 similar grains, which are virtually indistinguishable. The only way to recognize this grain is by looking at the plant itself. Actually, it's a seed which was cultivated by many of the ancient cultures of Mesoamerica, including the Mayans, Azteca and Inca. Today it is still used in sweets and delicacies in Mexico, including traditional sweets for the Day of the Dead.

Yet amaranth is finally being recognized as the nutritional powerhouse that it is. Of all the grains there are, this is the only one which contains all of the amino acids, the building blocks of proteins. That could be critical in a survival situation, where animal protein might be hard to come by.

Proteins are important, because they are what cells are made of. If you don't have enough protein in your diet, the body turns on itself, cannibalizing its cells in order to get the protein it needs out of them. The protein is then broken down into amino acids and reconstructed, if need be, into other proteins with which to build new cells. With Amaranth as a part of your diet, your body wouldn't have to turn against itself.

But amino acids aren't all that Amaranth has to offer.

In addition to them, **one cup of cooked amaranth** contains:

- Calories: 251
- Protein: 9.3 grams
- Carbohydrates: 46 grams
- Fats: 5.2 grams
- Manganese: 105% of the RDI
- Magnesium: 40% of the RDI
- Phosphorus: 36% of the RDI
- Iron: 29% of the RDI
- Selenium: 19% of the RDI
- Copper: 18% of the RDI

In addition to these nutrients, amaranth is high in antioxidants (naturally occurring compounds that help defend your organism against free radicals that can harm your body). It is especially high in phenolic acids, such as gallic acid, p-hydroxybenzoic acid and vanillic acid.

These antioxidants are believed to help combat heart disease and cancer. Laboratory studies have also shown that they reduce inflammation, and cholesterol levels too. Amaranth is also gluten free.

This powerhouse superfood is perhaps one of the more important grains to stockpile for survival, yet few are aware of its benefits.

Packaging Amaranth for Long-Term Storage

As purchased from the supermarket, amaranth isn't prepared for long-term storage.

Given that it's normal shelf-life is even shorter than that of other grains such as wheat, proper packaging and storage is critical if you want to make this superfood part of your survival stockpile.

That means protecting it from:

- Oxygen
- Heat
- Insects
- Bacteria
- Rodents

Fortunately, a method exists for doing this, and using it, you will be able to store unground amaranth for as long as 20 years.

You Will Need:

- Unground amaranth
- Five-gallon food-grade plastic buckets with lids
- Six-gallon or one-gallon aluminized Mylar bags
- Oxygen absorbers (can be bought together with the Mylar bags)
- Hair straightener
- Vacuum cleaner with hose
- Rubber mallet
- Indelible marker.

Many people use six-gallon bags for their dry food storage, but I'm using one-gallon bags this time.

There are two advantages when using the one-gallon bags. The first is that I don't have to buy as much amaranth to fill a one-gallon bag as I would to fill a six-gallon one. The second is that when the time comes to use it, I don't have to open the whole six gallons, but can use it one gallon at a time, keeping the rest fresh until needed. On the other side of the equation, you can't fit as much food in a bucket if you pack it in one-gallon bags.

If you buy your Mylar bags and oxygen absorbers together as a package deal, the supplier will provide you with the right oxygen absorbers to go with that bag sizes you bought. Otherwise, you need to determine what oxygen

absorber sizes (measured in grams) you want. This can vary, depending on the type of food you will store. Most vendors who specialize in selling these products will have charts on their website to help you make a decision on the right size.

The oxygen absorbers come sealed in plastic. They are highly sensitive, absorbing oxygen rapidly. Therefore, they need to be kept sealed in that package until the moment you are ready to use them. I recommend having an assistant work with you, who will be responsible only with opening the package, putting an oxygen absorber in the bag and then sealing the package.

There is always an indicator packaged inside the vacuum-sealed bagin which the oxygen absorbers are sold. It changes color to show when the oxygen absorbers have been exposed to too much oxygen and are no longer usable. Check this indicator before opening the bag, to verify that your oxygen absorbers are usable.

Manufacturers of these items also sell a plastic clip that slips over the end of the package which you cut open, allowing you to seal it. These clips don't cost much and are well worth the price, as they will help keep your oxygen absorbers from going bad.

Food-grade plastic buckets are white, as opposed to those used for paint and other purposes. They will have a label somewhere on the side, stating that they don't have BPAs and they are food grade buckets.

You can buy these at the larger home-improvement centres. It is also possible to get used ones for free from bakeries and restaurants which receive food products in them.

Packaging Your Amaranth

1. Label the outside of the bucket in multiple places, using the permanent magic marker. I always do this first so that I don't forget what's in the bucket. That can be a real problem if you are packaging multiple types of food at the same time.

2. If you are using six-gallon aluminized Mylar bags, you'll want to open them up inside the buckets before filling them. If you are using one-gallon bags, you can fill them up very nicely by standing them up in a coffee can.

3. Fill the bags with unground amaranth. In the case of six-gallon bags, stop filling when

you are about one inch below the rim of the bucket. In the case of one-gallon bags, stop about three inches below the edge of the bag.

4. Using a hair straightener, seal all but two inches of the top of the bag. If your hair straightener has a temperature control knob, you want a medium-low heat, somewhere around 280°F. A clothes iron works as well. You don't need to seal it all the way down to the amaranth; just seal a strip about an inch wide. The extra loose space enables you to reseal the bag later, if need be.

5. Place an oxygen absorber in the opening of the bag, pushing it down into the bag so it doesn't remain in the opening.

6. Put the end of your vacuum cleaner's hose in the opening and suck out as much of the air from the bag as you can. You'll want to just barely put the hose into the opening, so that it doesn't suck out any of the contents. Notice in the image how little the hose is stuck into the bag.

7. Pull the vacuum cleaner hose out of the bag and seal the opening with the hair straightener.

8. If you're using one-gallon bags, stack them in a five-gallon food-grade plastic bucket. If you're using one-gallon bags, fill the bucket with as many bags as it will fit.

9. Place the lid on the bucket and drive it home with the rubber mallet. You will be able to tell when the seal is seated, as the sound of the mallet striking the lid will change.

10. Store the buckets in a cool, dry place.

Please note that five-gallon plastic buckets can be buried with food in them, forming a food cache. The only part that will be damaged is the metal wire handle. The bucket will protect the food stored inside.

Using Your Amaranth

Amaranth can be used whole, cooked as a grain, or ground into flour. When ground into

flour, amaranth can be substituted directly for wheat flour in recipes, increasing the nutritional value of your baked goods. It has a slightly nutty flavor which goes well with whole wheat or multi-grain breads.

If you are going to be using ground amaranth as part of your survival plans, you may want to invest in a high-quality grain mill for grinding it. Like other grains, ground amaranth doesn't store as well as the whole grain does.

Amaranth can also be cooked and eaten, either as a breakfast food, like porridge, or as as a substitute for other grains and pasta, served as a side-dish or bed for other foods to go on.

When using it as a bed for other foods, whatever sauce the other food is cooked in is poured over the amaranth, which soaks up the flavor of the sauce nicely.

To cook Amaranth, boil 3 cups of water in a saucepan, covering it with a lid. Once the water comes to a boil, add 1 cup of amaranth, cover the pot, and reduce the heat to medium-low. Allow to cook until all the water is absorbed (for about 20 minutes). Once all the water is gone, it is ready to be served.

This delicious grain can be used as a breakfast food by adding nuts, fruit (dried fruit too) and honey. Butter and brown sugar can also be added, depending on your taste.

Preserve Your Cheese For Years Using This Method

Do you want to always have cheese on hand and not have to bother about going to the grocery store all the time? Well, waxing cheese is the answer to your wishes, because this is the best method to preserve it (and age it) for the long-term.

In addition, wax protects the cheese from bacteria and mold. It also keeps it moisturized and reduces the time you have to spend working on the cheese.

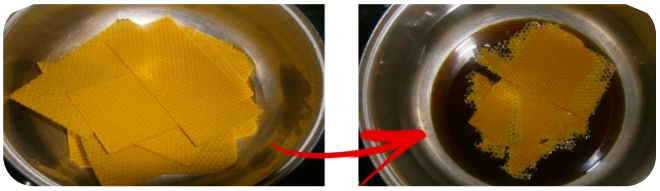
Waxing cheese is the easiest and best thing you can do to take your passion for making and aging cheese at home to the next level.

Ingredients

- Cheese (Ideally, permit the cheese to produce a bare, yellowish coating by being left unsealed on a stand in a cool area for several weeks.)
- Honey with which to give the cheese an interesting taste. For 7 oz of cheese, I used a teaspoon of honey (optional)

Melting the Wax

Melting the wax is as simple as melting any other material. You will just need a heat source and a pot (preferably an old one since cleaning it will prove to be quite difficult).



Warning: Molten wax is flammable, so make sure you check it regularly during the melting process.

Adding the Honey (Optional)

After the wax has melted, you need to take it off of the stove and add the honey. Stir the mixture for five minutes so the honey dissolves completely and into the wax.

After that, leave it to rest for another five minutes to cool down enough so that you can handle it. You can speed up the process by stirring it.

Brushing the Cheese / Dipping the Cheese

Before you start doing any of it, you need to choose your method. You can brush the cheese, and this will result in a more even wax.

It also requires smaller quantities of wax, because you'll only need a wax bath as deep as the brush's length, so that you can dip it in.

The second method is to dip the cheese. This is my method of choice because it kills off any mold spores that might still be on the cheese, and also prevents any more mold from growing.

Another advantage is that you won't have to trouble yourself with cleaning up a brush,

but you will need to be very cautious with the heated wax, seeing as it can easily burn your hand.

Dip the cheese into the wax and leave it submerged for three seconds, then rotate it to the other side.

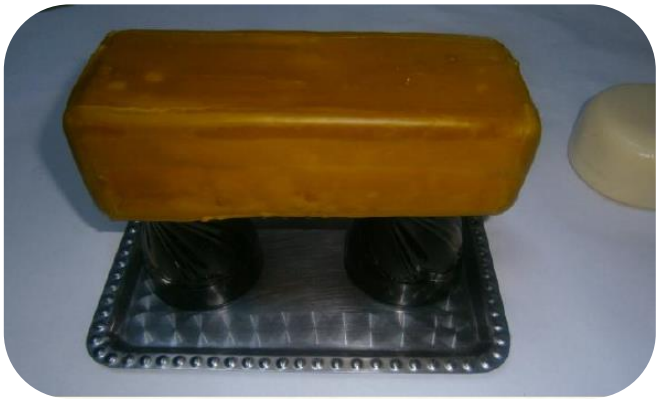
After that, take the initial portion of cheese and cover the unwaxed end. One light coat is better than a dense layer.

Let the wax solidify on the cheese, and then repeat the same process with the other parts of the cheese. Make sure you fill any air scopes, thus inhibiting mold germination.

I would recommend doing this with bare hands, even though there's a risk of burning your fingers. It will give you a better grip when rotating the cheese.

Repeat the steps above to cover every part of the cheese with the second layer of wax.

And there you go—your product is finished. Place it on two glasses so it can dry faster. The glasses are also necessary if you want to brush the cheese, so that you have a good reach over it. I would also recommend placing something (aluminium foil works best) under the glasses so you don't get the tablecloth all messy.



I used the same method with a round cheese. I dipped it into the wax and slowly turned it around so I could cover the entire side. If you're going through this process with multiple pieces of cheese, you might need to put the wax back onto the stove for a few seconds. This way it will be hot enough for dipping.

After finishing up with this piece, place the cheese onto the glass and let it sit for a few seconds; it cools off pretty fast, so you won't need to wait too long.

Collect all the wax that was left. You can store it and reuse it at any time.

When you start eating your waxed cheese, you can seal the remaining chunks with some melted wax.

Cheese waxing is an easy and quick way to protect your cheese from anything that would slow down its aging process.

The entire process took me one to two hours to complete, but it was worth it! Your cheese will age beautifully and safely.

Essential Reminders:

When you take out any slices from your cheese, you can just go back and add more heated wax to those points.

- The wax is always reusable. Therefore, you can eat your cheese and then learn how to preserve the wax for later purposes.
- If you see spots of mold wherever the wax fractured and air leaked inside, simply chop off the ruined area. The

remainder of the cheese will always be exquisite.

- Cheese can age for a long time, so do not be shocked if your cheese tastes strange when you save it for an extended period of time. It should taste even better as time goes by!
- You may also pre-cover your cheese using a cheese cloth. It's difficult to use the already waxed cheese later since it was difficult to tear off a single sheet of the cheese cloth. I always put the wax on every bit of the cheese that we are not utilizing and seal up the free end using the wax of the pieces we used.

That's all there is to it! It is truly a relaxing routine and you will feel great knowing that you have an entire stock of cheese available and waiting for you!

How To Make The 2400-Calorie Emergency Ration Bars Designed To Keep You Well-Fed For A Whole Day

Sitting at a restaurant table with a government worker, we were discussing the importance of emergency food. The discussion was centered on freeze-dried meals and canned foods. We were discussing the feasibility of both in a serious disaster situation.

We were not talking about the novelty power outage scenario where we all have fun bringing out our emergency preparedness tools and toys. Rather, we were imagining a situation where we are helping starving neighbors, fighting oncoming floods, or are trapped in an underground bunker, taking shelter from nuclear fallout. It was in that moment that he stressed the importance of convenience in a disaster scenario.

His example was cereal and shelf stable milk. He described it as follows, “It takes no time at all to put together and will sustain your family members without complaint.”

I would be lying if I said this didn’t change my point of view on disaster foods. ‘Could it be so simple?’ I thought to myself. More importantly, I began to realize how necessary this convenience could be.

Of course, there is a food that offers the ultimate convenience, and is perhaps the best choice in a situation like the ones mentioned above. I am referring to the calorie emergency rations.

These bars are often prepared in a 2400-calorie pack that is designed to feed you for a full day. The rations are often broken into 4 squares of 600 calories each.

They are not only used by preppers and survivalists, but also by backpackers and hunters.

This proves their efficiency as a calorie provider. Of course, the elk hunter would like a delicious back strap for dinner, but these rations are a nice second option.

Below I will outline the process of creating your own rations. If you follow these steps you will have your own emergency food in case of a disaster scenario, as well as something to take on your next hike.

Gather the Following Tools and Ingredients

(Preheat your oven to 375°F)

Tools:

- 2-inch-deep baking pan
- Wooden spoon
- Small sauce pot

Ingredients

- 3 tablespoons olive oil
- 2 cups maple syrup
- 4 tablespoons raw honey
- 2 tablespoons peanut butter
- 1 cup frosted flakes
- 3 cups oatmeal
- 1 cup protein powder
- 1 cup almonds
- 1 cup raisins.

1. Begin by combining your honey, olive oil and maple syrup in a sauce pot. Heat this mix over medium heat and stir frequently until it begins to simmer.

2. Add your two tablespoons of peanut butter to the mix in the pan. Stir the peanut butter until it melts into the syrup mix. Be careful!

This syrup mix will be very hot and if it gets on your skin it's almost as bad as napalm!

3. Take the remaining dry ingredients and add them to a large bowl or, if need be, two large bowls. You don't want these bowls to be filled more than halfway as you will be doing a lot of mixing in them.

If they are already too full with only the dry ingredients, you will have a terrible time mixing in your liquid mixture in the next step.

4. Once you have thoroughly mixed up your dry ingredients, take the hot liquid mixture and add it over your dry ingredients. While it's still hot, stir everything together to coat your dry ingredients thoroughly. Make sure everything is thoroughly mixed and all ingredients have a nice sheen to them.

5. Dump your mix into a baking pan. This pan should be at least 2 inches deep. Be sure to press and pack this mix down tight. This will allow for tight squares to be cut once you are done baking.

6. Bake in the 375°F pre-heated oven for 20 minutes until the edges begin to brown.

7. Allow the mix to cool. Cut into 2×2 squares. Each square will contain roughly 600 calories. Packing together 4 of these squares will offer 2400 calories. That's enough calories to push through a long hunting trip or life-threatening disaster situation.

8. You can even portion them in little muffin pans if you want to get fancy. I kind of like the little pucks to be honest.

These rations are sold by some of the solid companies in the industry, but making your own is pretty easy. As long as you have the right pans and the necessary time, these rations can be made and stored in your home with little costs.

Making Your Own MREs At Home

Canned and preserved foods are found in the pantries of most preppers. And they have also been popular when packing for survival.

However, there are a couple of drawbacks to using canned foods for survival kits.

One is their size and bulk, taking up a lot of room. That utilizes significant space and energy when packing and traveling with that kit.

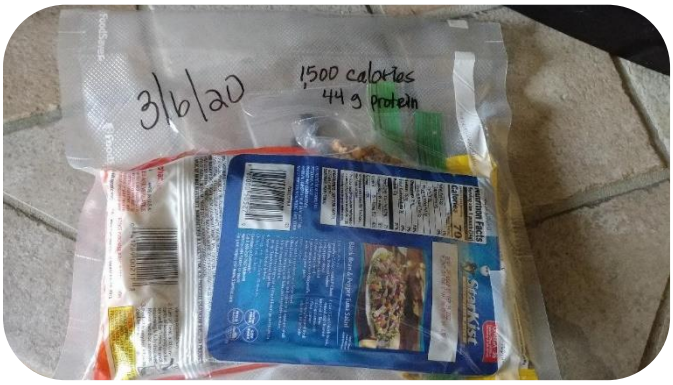
Another issue is that once opened, canned items need to be consumed rather quickly before going bad, especially if you don't have access to refrigeration. That will lead to consuming larger than desired amounts of the same item in a short period, or a lot goes to waste.

A great alternative to canned and preserved foods is MRE packs (Meal ready to eat). They are compact and often lightweight, making it much easier to store, as well as pack and carry. And the long shelf life doesn't end, just because you open the main package. I say "the main package", because a homemade MRE will typically consist of a lot of small packages within a large one.

Because of all this and that they are easy to prepare, MREs are used not just by preppers, but also by federal disaster agencies and military.

Choosing Items for Your MREs

One thing to consider is nutrients. Make sure to put a balance of proteins and carbs in each



bag. You will want both to sustain you throughout the day.

If your pack is for one meal, the goal should be around 1,000 calories. That might sound like a lot of calories, but if you are in survival mode, you could burn through those quickly. Remember, if you pack it right, you can easily save what you don't eat, for later.

Another consideration is shelf life. Pick items that are known to last a long time before opening. Now, each bag can be for 1 meal or 1 day.

So, no need to worry too much about it having a long shelf life after opening. Just make sure nothing requires refrigeration.

Preparation is also key in choosing foods to put in your MRE. You won't want to put in items that need to be cooked. You might get lucky and have the ability to cook over a campfire. But don't bank on it.

So ready to eat foods are the best options. Some foods taste better when warm, but don't necessarily require cooking. Those foods are fine to put in the pack.

Other than the above, it will come down to your own personal taste, but here are a few

options to consider when making your own homemade MREs:

- Instant Ramen Noodles – A pack is lightweight, there is a variety of flavors and only require water.
- Instant Oats – They are a great source of fiber, and only require water
- Jerky – Good source of protein and flavor. Some jerky can be expensive. A less expensive alternative is Slim Jim sticks, which are individually wrapped (another perk!).
- Dried Fruits – Raisins and other dried fruits such as cranberries, cherries, and blueberries are nutritious and add a punch of flavor.
- Crackers – These make a good filler by adding calories, and can be a nice replacement to bread for other foods.
- Tuna – Small packages of tuna are lightweight, have a long shelf life, are easy to eat, and represent a great source of protein.
- Granola or Energy Bars – Easy to eat and great for adding fiber, nutrients, and protein. There is also no preparation required.
- Candy – If you like sweets, add a pack of M&M's, Skittles, or a candy bar. This is not meant to replace an energy bar, but to satiate a sweet tooth. The added boost of sugar could be a good thing as well. Just make sure this is just a small addition.
- Seasonings and Condiments – Add small packets of seasonings, such as salt, pepper, or sweetener, as well as packets of condiments that you can save from a meal out. They are easy to pack and can add some flavor to your meal.
- Dried Instant Beverages – Instant coffee, dried milk, tea bags, and powdered protein shakes can all be added in small packets; they only require water.

You can consider other prepared items from the store that have a decent shelf life, such as Hormel ready to eat meals. Just take the pack out of the outer box to save room.

Homemade items are a great option if you have time to prepare them. Here are a few good ideas that will add a good balance of calories and proteins, as well as nutrients for survival:

- High-Calorie Ration Bars (our step by step recipe & pictures here)
- Dried Plums or other Fruits (our step by step recipe & pictures here)
- Bean and Rice Soup Mix (our step by step recipe & pictures here)
- Matzo Bread or Hardtack (our step by step recipe & pictures here)
- Dried Meats, such as Jerky or Pemmican (our step by step recipe & pictures: for Pemmican here and for Jerky here).

There are non-edible items to consider throwing into your MRE, so they are readily available to use each time you open a pack.

I would consider throwing in the following if it would help with the other items in your pack:

- Matches (our step by step guide with pictures here)
- Wet wipes
- A utensil.

Get creative with your choices, because there are many options.

Putting Your MREs Together

Group the items you choose in a manner that provides a complete meal, keeping in mind it should be at least 1,000 calories for a survival

situation, and be a good mix of carbs, protein, and vitamins/minerals. Make each pack a little different, so your meals won't be the same. Also, note the expiration dates, keeping them similar in each pack.

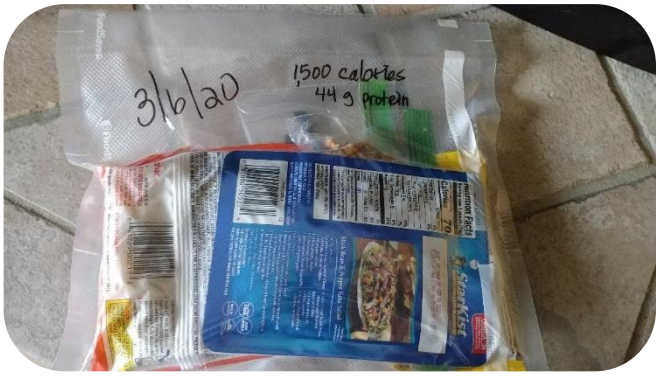
Place each MRE grouping into a plastic bag that can be used with a vacuum sealer.

The sealer not only helps with freshness but also space. Speaking of space, some pre-packaged items, such as instant ramen, should be pierced slightly to let the air out before vacuum sealing. However, doing that with a tuna pack would be messy.

You can make notes on the outside of the package with a marker, such as the date it was packed, the seasonings in the pack, calorie count, and whatever other information you would find helpful.

In addition to the MREs I prepared above, I also prepared 2 more that could be for breakfast and lunch, with simple products that I either had in my pantry or quickly threw into my basket at the market.

I marked the date I put them together, as well as the number of calories and protein in each pack.



To sum up, vacuum sealing your MREs will help keep them fresher. It will also make it more compact for easier storage.

Just make sure to choose ingredients that will have at least 6 months to a year's shelf life. If they are approaching the expiration date, open and enjoy, rather than waste them.

Then, make new packages to be prepared at all times.

Edible Plants You Can Find In The Wild

Before the dawn of agriculture, early man ate a wide variety of wild plants for nourishment, including more than 250 fruits. A study made years ago found that early American Inhabitants used over a thousand wild plants. With the development of agriculture, man became less dependent on wild plants and thus, the knowledge of wild plants was not taught passed on any longer.

Scientists have catalogued over 20,000 edible plants, yet most people eat less than 20 different species. In today's tumultuous world, a knowledge of wild foods could be essential to our survival.

Where to Gather Wild Foods

Start by identifying the common edible wild plants in your backyard or in the local parks and botanical gardens nearby. Be careful where you gather plants from if you're intending to consuming them. Use a guidebook and be sure you identified the plant correctly. Follow these safety guidelines for gathering:

- Always identify the plant you are gathering. Use pictures and descriptions if you do not have first-hand knowledge of the plant. Take along a field guide whenever possible.
- Pick only as many plants as you need, and always leave plants behind to replenish the field.
- Do not eat plants that grow in areas that have been sprayed with chemicals or that grow in polluted waters.
- Avoid plants that grow near busy roadways. They may contain high concentrations of lead and other harmful chemicals from exposure to car exhaust.
- Plants growing in contaminated waters should be considered contaminated. Where Giardia lamblia or other parasites are common, boil or disinfect plants before eating.
- Never gather and eat wild mushrooms unless you are an expert in dealing with mushrooms. It is very easy to make a fatal mistake.
- Do not pick rare or endangered plants.
- Eat only small amounts of wild plants the first day, increasing your consumption of any one plant gradually. Your system may not tolerate all plants, or you may have unknown allergies.
- Whenever possible, introduce wild plants to your diet one at a time. This way, if you have a reaction to a plant, you will know which one to avoid.
- Wash and clean all plants before eating.
- Never eat any fruit or plant that is starting to spoil or that has mildew or funguses growing on it.
- Eat only the plant parts identified as safe.

The Universal Edibility Test

In a survival situation, you may not have your field guide for edible plants available, and yet, you still need to eat.

In such a survival situation, there is a test you can use to determine whether a plant or fruit is edible or not. If you have a reaction at any point during the test, stop the test and choose a different plant or plant part.

Follow These Steps:

1. Choose a plant that is abundant in the environment and that you believe to be edible. Test only one part of the plant at a time. For example, test only the leaves.

2. Remove the plant part to be tested from the rest of the plant.

3. Crush the plant and smell it, looking for strong or acid odors, but do not rely on smell alone.

4. Place the crushed plant part on the inside of your elbow or your wrist for 15 minutes. If no skin reaction occurs, you can continue.

5. Wait 8 hours without eating before continuing with the test, Drink only purified water. Check your skin again for a rash or irritation. During the test do not eat or drink anything other than the test plant and purified water.

6. Prepare a small portion of the plant part and prepare it for eating. It is usually best to start with a cooked portion. Some plants have toxins that are easily destroyed by cooking, if you are unable to cook it, you can continue to test it raw.

7. Touch a small portion of the prepared plant to your lip and hold it there for 3 minutes, watching out for any burning, itching, or any other irritation.

8. If there is no reaction after 3 minutes, put the small sample on your tongue and hold it there, without chewing or swallowing, for 15 minutes.

9. If there has been no reaction, chew the portion thoroughly and hold it in your mouth for another 15 minutes without swallowing.

10. If you still have not experienced any burning, itching, numbing, stinging or irritation of any kind, swallow the small portion, but only that one small bite.

11. Wait another 8 hours without eating. If you have any side effects during the wait time, induce vomiting and drink plenty of water.

12. If you have no reaction to the first bite, eat a small portion of the plant, approximately 1/4 cup, prepared in the same way, and wait another 8 hours. Once again, if you experience any side effects, induce vomiting and drink plenty of water.

13. If there is still no reaction to the plant, consider the tested plant part safe to eat as prepared. Other parts of the plant will need to be tested in the same way before eating. Increase amounts eaten slowly and gradually.

Remember that large portions of an unfamiliar plant can cause diarrhea, nausea or cramping on an empty stomach, so eat even safe plants in moderation.

Acorns and the Oak Tree, Quercus and Lithocarpus

Identification

There are about 600 species of oak trees and shrubs. The trees are either deciduous or evergreen, with spirally arranged leaves and

leaves with lobate or serrated leaves. A few species have leaves with smooth margins. Acorns are the nut of the oak tree. The edible nut is covered in a cup shaped shell containing a single seed topped with a cap.

Photo by David Hill - CCA 2.0

Edible Use

Acorns have traditionally been used as forage for pigs, but they are also edible for humans. Gather acorns in the fall and store them whole in a cool, dry place for use throughout the winter.

Because acorns contain bitter tannins, which can hinder digestion, they need to be cracked, chopped, and soaked in several changes of water before eating. Soak them until the water no longer turns brown, then cook or dry to use as flour. Acorns can also be used as a coffee substitute.

Medicinal Uses

Oak has been used as a medicine to treat bleeding, swelling and dysentery. It functions as a diuretic and as an antidote for poison.

Dried and powdered root controls bleeding, reduces swelling and prevents infection. Powdered root was also used as a snuff to treat tuberculosis. Poultices or compresses made from the leaves promote wound healing, treat rashes and irritations and reduce swelling.

Amaranth, Amaranthus Retroflexus

Identification

Amaranth is an edible weed common to most continents. Densely packed flowers grow on stems during the summer or autumn. There are over 60 species of amaranth with red, purple, green or gold flowers.

Edible Use

All parts of the plant are edible, but watch out for small spines that appear on some leaves.

Like many greens, amaranth leaves contain oxalic acid, so it is recommended that you boil the leaves if you are eating them often or in larger quantities. A few raw leaves in a salad is safe.

Harvest amaranth seeds to make a gluten-free grain that is easy to harvest and can be cooked like rice.

Medicinal Uses

The amaranth seed contains squalene, notable for its anticancer and antioxidant agents. Squalene is estimated to have three times as many antioxidants as vitamin C. The leaves,

grain, and oil of amaranth, when eaten regularly, have been shown to protect the body from cardiovascular disease and to help lower blood pressure naturally.

Asparagus, Asparagus Officinalis

Identification

The same asparagus that we pay dearly for at the supermarket also grows wild. Wild stalks are usually much thinner than the ones found in the supermarket, but they can be used in all the same ways.

Asparagus is a perennial, herbaceous plant with many stems, feathery foliage and bell-shaped white/yellow flowers.

Edible Use

Gather young asparagus shoots in the spring, before the leaves begin to open. The shoots turn woody as the leaves begin to appear. Eat them raw, steamed, or boiled.

Medicinal Uses

The leaves and the shoots have a cleansing effect on the digestive system, kidneys and liver. The roots are used as a diuretic and laxative and can reduce blood pressure. They are also used to relieve symptoms of dropsy, gout and rheumatism. The powdered seeds can be used as an antibiotic or to relieve nausea.

Autumn Olive, Elaeagnus Umbellata

Identification

Autumn Olive is an invasive shrub found in the central and eastern parts of the United States. It is often found in old fields and on roadsides. It is identifiable by the small silver speckles that cover the leaves and berries.

Edible Use

In the fall, the autumn olive produces an abundance of edible red berries. While the berries are edible raw, they are very sour. The flavor is greatly enhanced by cooking them with sugar.

The seeds can be eaten with the berries either raw or cooked, however the seed coating is very fibrous. The berries can be dried and used for tea.

The leaves and flowers can be used to make a tisane. Since little research has been done on this plant, it is advised that pregnant women avoid it.

Medicinal Uses

Autumn olive is currently being investigated for its ability to prevent and reverse the growth of cancers. The flowers are astringent, and are used as a cardiac tonic and as a stimulant. The seeds are used to treat coughs, while oil pressed from the seeds is used to treat lung problems.

Beech, Fagus Grandifolia

Identification

The American beech is deciduous, growing 66 to 115 feet tall. The trunk and branches are covered with a smooth, silver-gray bark. The leaves are dark green with serrated edges.

Edible Use

The inner bark, young leaves, and the nuts of the American beech tree are edible. In times of scarcity, beech sawdust has been added to flour to extend it when baking.

The sweet seeds are edible raw, but should not be eaten in large quantities because of the fagin content in the skin of the seeds. Roasting the seeds allows the skin to be easily removed, along with the potentially harmful fagin. Crush and boil the seeds to make a nourishing drink or grind them to use like cornmeal for baking.

Medicinal Uses

The leaves and bark are used to reduce inflammation and treat ulcers. The leaves calm the stomach and nervous system. Boiled leaves made into a poultice soothe and heal burns and help repair skin damage caused by frostbite. Ground beech nuts have been used as medicine for headaches, vertigo, epilepsy and hydrophobia as well as for deworming.

Balsam Fir, Abies Balsamea

Identification

The balsam fir is native to eastern and central Canada and the north-eastern United States. It is a medium-sized coniferous evergreen growing up to 89 feet tall, although most trees reach a height of 46 to 66 feet tall.

The flat needles are dark green and the bark is smooth and grey, with resin blisters. It is commonly grown as a Christmas tree in the United States.

Edible Use

The inner bark is edible when chewed or cooked. It can be dried and pounded into a powder for use as a flour and thickening agent.

Young tips of shoots can be used as a tea substitute. Caution: Some people are allergic to balsam fir and develop a contact dermatitis when exposed to the leaves.

Medicinal Uses

The bark, needles and resin are common treatments for a variety of illnesses. The needles have a high concentration of Vitamin C and are useful as a tea to treat poor health, colds, coughs, bronchitis, colic, asthma, rheumatism, bladder inflammation, sciatica, lumbago, epilepsy, and swollen glands, and also prevent scurvy.

Smoke from burning needles is useful to treat congestion and headaches. Resin from the bark blisters is used to treat wounds, sores, and skin diseases.

Black Cohosh, Cimicifuga Racemosa

Identification

It is also known as black snakeroot, black bugbane, and fairy candle. Black cohosh is a member of the buttercup family native to eastern and central North America. It prefers woodland habitats and has star-shaped flowers that grow on stems up to 8 feet tall. The plant has an unpleasant odor which repels insects.

Edible Use

Black cohosh is not edible. It is used as an herbal remedy in small doses.

Medicinal Uses

The roots and rhizomes have been used throughout history to treat arthritis and muscle pain. Extracts from the plant are analgesic, anti-inflammatory, and act as a sedative. Currently, black cohosh extracts are used as an herbal remedy for menopause symptoms, to treat menstrual cramps, induce labor, and is sometimes used for a hormone replacement therapy. Avoid black cohosh if you are pregnant or lactating. It can induce miscarriage and harm young children. Women who have or have had breast cancer should also avoid it.

Side effects include headaches and skin rashes; extended use can cause liver damage.

Blackberries

Identification

Blackberry vines have red branches, long thorns, and wide leaves with jagged edges.

The white flowers bloom in the spring and the berries ripen in the fall. “Blackberries are red when they are green”, so wait until they turn black to harvest them.

Edible Use

Use the soft fruit raw or cook it into jams, jelly, or desserts. You can also make wine with them. The roots can be eaten if boiled until they soften. The dried leaves are used in herbal teas. Young shoots of the plant are edible raw if harvested as the first sprout in the spring.

Medicinal Uses

The root-bark and leaves are diuretic, cleansing, and strongly astringent. They are used as a remedy for dysentery, hemorrhoids, cystitis, and diarrhea.

Use the roots to make a mouthwash and gargle with it to treat sore gums, mouth ulcers and sore throats. The leaves can also be used to make mouthwash and to treat thrush.

Black Locust, Robinia Pseudoacacia

Identification

It is also known as false acacia. The deciduous black locust tree is native to the south-eastern United States, and can be found widely naturalized in other parts of the country.

It is also found in Europe, South Africa and Asia. The tree reaches 40 to 100 feet in height. The tree has compound leaves, each containing many leaflets.

Edible Use

The bark and leaves of the black locust are toxic, but the flowers are edible. They make a delicately flavored jelly. Shelled seeds are also safe to eat, both raw and boiled.

Photo By Mehrajmir13

Medicinal Uses

The flowers are used as a laxative, emollient, diuretic and antispasmodic. Cooked flowers are eaten to treat eye problems. The inner bark and root-bark are emetic, purgative and tonic. Hold the root bark in the mouth to relieve pain from a toothache or chew it to induce vomiting. Juice from the leaves is said to inhibit viruses.

Bloodroot, Sanguinaria Canadensis

Photo by UpstateNYer, CC BY-SA 3.0

Identification

It is also known as bloodwort, redroot, red puccoon, and pauson. Bloodroot is a perennial, herbaceous flower found in eastern North America. It has variable leaf and flower shapes, but is identifiable by the reddish rhizome and its bright orange juice.

Edible Use

Bloodroot produces the toxin sanguinarine, which is stored in the rhizome. No parts of the plant or root are recommended for internal use. Ingested bloodroot extract can cause nausea, vomiting, headaches, and may lead to a loss of consciousness.

Medicinal Uses

Bloodroot has been used as an herbal remedy for skin cancer. Applications of bloodroot or its sap to the skin can destroy cells, including cancerous cells. There is no way to determine whether all of the cancerous growth has been eliminated, and the cancer can return. Since some healthy cells are also killed, it can leave ugly scars. A tea made from the root has been used for sore throats, fever and body aches.

Blueberry, Cyanococcus, American Blueberry

Identification

Blueberries grow on upright shrubs of up to 13 feet in height. Leaves can be evergreen or deciduous. The white, pink or red flowers are bell-shaped. The berries are deep blue to dark purple when ripe, usually in mid-summer.

Edible Use

Eat the fruit raw or cooked.

Medicinal Uses

Blueberry juice has been used as a treatment for diseases of the urinary tract and the prevention of cystitis. It also helps prevent or dissolve kidney stones. Blueberries are high in antioxidant compounds and may help protect against oxidative DNA damage caused by aging. Blueberries may also help prevent cancer.

They help lower blood pressure and prevent heart disease. Several studies have shown that blueberries, eaten regularly, help improve insulin sensitivity and lower blood sugar levels.

Bull Thistle, Cirsium Vulgare

Identification

It also known as spear thistle or common thistle. Bull thistle, a member of the daisy genus, is commonly found throughout North America, Europe, Asia, Africa, and Australia. It is a biennial, forming leaves and a taproot the first year and flowering in the second year.

Edible Use

The stems are edible when peeled and steamed or boiled. The tap root can be eaten raw or cooked. Harvest the plant in the first year, before it flowers. Once the plant flowers, it is too bitter to be enjoyable.

Medicinal Uses

The roots and plant have been used in poultices for sore jaws or as an herbal steam for treating rheumatic joints. An infusion of the whole plant has also been used externally or internally as a treatment for bleeding piles.

Bunchberry, Cornus Canadensis

Identification

It is also known as Canadian dwarf cornel, Canadian bunchberry, quatre-temps, crackerberry, and creeping dogwood. Bunchberry is a small, erect perennial that grows 2 to 8 inches tall in the northern United States and Canada. The upper leaves form a whorl, while the lower leaves are in the opposite order. The fruit are bright red berries which grow in a bunch.

Edible Use

Both the fruit and the leaves are edible. Eat the fruit raw or cooked, or dry it for later use. Eat the leaves raw or boiled.

Medicinal Uses

Leaves applied to wounds and sores help stop bleeding and promote healing. The leaves and berries are useful as a treatment for the common cold.

Burdock, Arctium Lappa

Identification

Burdock is a medium to large plant with large, dark green leaves and purple, thistle-like flowers. The coarse, oval leaves can grow up to 28 inches long, with lower leaves having the shape of a heart.

Edible use. You can eat the leaves and peeled stalks raw or cooked. The leaves taste bitter, but much of the bitterness can be removed by

boiling them twice, changing the water each time.

The tap roots are also edible when peeled and boiled. The root is crisp and has a mild, sweet flavor that is improved by soaking the cut roots in water for a few minutes before cooking.

Immature flower stalks can be harvested and eaten in the late spring, before the flowers appear. The taste is a bit like that of an artichoke, a relative of burdock.

Medicinal Uses

Dried burdock is considered a diuretic, diaphoretic and blood purifier. Oil from the root is used as a scalp treatment. Taken internally, it increases circulation to the skin, helping to detoxify it and treat skin abscesses, acne, carbuncles, psoriasis, eczema, and other similar skin diseases.

Burdock root is also good for helping in cellular regeneration, treatment of Crohn's disease and diverticulitis, treatment of Hepatitis, and also Chronic Fatigue Syndrome. Burdock is high in inulin, a carbohydrate that is helpful for diabetes and hypoglycemia.

Cattail, Typha

Identification

Usually found near freshwater wetlands, cattails are semi-aquatic perennials with hairless flat blade leaves and a unique flowering spike. The plants grow to heights of 3 to 10 feet. In some areas, cattails are considered endangered and it is illegal to pick them, and in other areas they are considered invasive. Know your local laws before you plant or harvest this edible plant.

Edible use. The cattails spikes, roots, leaves and stems are edible. The corn-dog-like flower spikes are eaten raw like corn on the cob. Boil the leaves before eating. The roots and stems can be eaten raw or boiled.

Medicinal Uses

Cattail has natural antiseptic properties. A jelly-like substance found between young leaves can be used on wounds, boils, sores and rashes, and as a powerful analgesic taken internally or used topically to relieve pain and reduce inflammation.

The plant has coagulant properties, helping with blood clotting and providing relief from menstrual bleeding.

Clover, Trifolium

Identification

Clover can be found in most open, grassy areas. They are small ground cover plants, easily recognized by their distinctive trefoil leaflets.

Most clover will grow in sets of three leaves, but consider yourself lucky if you find sets of four. Sets with even more leaves have been noted.

Edible Use

You can eat clover leaves and stems raw or boiled.

Medicinal Uses

Red clover has been used to treat cancer, whooping cough, respiratory problems and skin irritations. It is known to contain isoflavones which have estrogen-like effects in the body and have shown some potential in the treatment of hot flashes and other menopause symptoms.

White clover leaves are used in a tea to treat coughs, colds, and fevers. Tea made from the flowers treat rheumatism and gout.

Chicory, Cichorium Intybus

Identification

It is also known as blue daisy, blue dandelion, blue sailors, blue weed, bunk, coffeeweed, hendibeh, horseweed, ragged sailors, succory, wild bachelor's buttons, and wild endive.

Chicory grows as a small perennial, herbaceous bush with blue, lavender or white flowers. The stem is tough, hairy and grooved when flowering. It grows up to 40 inches tall. The leaves are shaped like a lance tip. Flowers appear from July until October and are usually blue, but occasionally pink or white.

18 Photo By Lmmahood

Edible Use

The entire plant is edible, but the leaves are bitter. Reduce the bitterness by boiling them and discarding the water.

Use the leaves raw or boiled. The roots are tasty when boiled and make a good substitute for coffee when roasted and ground.

Medicinal Uses

Root chicory is effective against intestinal worms and internal parasites. Chicory flowers are used as a folk medicine as a tonic, and also as a treatment for gallstones, stomach upsets, sinus problems and cuts and bruises.

A poultice of the roots is useful against chancres and fever sores. It contains inulin, which may help with weight loss, and helps in blood sugar regulation in diabetics.

Chickweed, Stellaria Media

Identification

It is also known as chickenwort, craches, maruns, and winterweed. Chickweed sprouts in late fall or winter, then grows large matts of

plants. Leaves are opposite each other and oval. The plant produces small white flowers with lobed petals. There are several closely related plants which are not edible, but Stellaria media is easily distinguished from related plants by a close examination of the stems.

Edible chickweed has fine hairs on only one side of the stem and on the sepals. Inedible species have fine hairs covering the entire stem.

Edible Use

Chickweed leaves are eaten raw in salads or boiled as a leaf vegetable. The plant contains saponin, which can be toxic when eaten in large quantities.

Medicinal Uses

It is used as an herbal remedy to cool and soothe itchy skin and treat pulmonary diseases. Its high iron content makes it a valuable treatment for iron-deficiency anemia. It is used to treat skin diseases, rheumatic pains, arthritis and menstrual cramps.

A tea made from stems can be applied externally to treat bruises and aches and pains.

Chufa Sedge, Cyperus Esculentus

Identification

Chufa sedge, also known as nut grass, yellow nutsedge, tiger nut sedge or earth almond, is a sedge grass native to most of the Western Hemisphere, Southern Europe, Africa, the Middle East, Madagascar, and India. It has become naturalized in many other parts of the world. Chufa is an annual or perennial plant that grows up to 3 feet tall.

Chufa has triangular stems that bear slender leaves and spikelets with flat, oval seeds, surrounded by four hanging bracts. The plant is very fibrous and is often mistaken for grass. Chufa is valuable for its edible tuber, called tiger nuts or earth almonds. The roots are extensive, with scaly rhizomes and small edible tubers.

Edible Use

The tubers have a slightly sweet, nutty flavor. They are hard and require soaking in water to

soften them before eating. Grind them into a flour for baking or to make tiger nut milk. The tuber is rich in fats, starch, and protein, and makes an excellent food source.

Medicinal uses. Chufa tubers have been used as a treatment for intestinal worms and bloating. It is a powerful uterine stimulant and is also used as an antidiarrheal, aphrodisiac, digestive treatment and tonic. Chufa milk is packed with nutrients and vitamins that support healing and protect the skin.

Cleavers, Galium Aparine

Identification

Cleavers, also known as goosegrass, clivers, catchweed, stickyweed, sticky willy, sticky willow, and robin-run-the-hedge, are an annual that grow along the ground, attaching themselves with small hooked hairs on the stems and leaves. Tiny white or greenish star-shaped flowers appear in early spring until summer in clusters of two or three. Leaves are arranged in whorls of six to eight.

Edible Use

Some people get an unpleasant rash from contact with cleavers and should not eat it. For most, Gallium aparine is edible. Gather the leaves and stems before the flowers appear and cook them like a vegetable. Dry and roast the fruits for use as a coffee substitute.

Medicinal Uses

A poultice made from cleavers is used on wounds, ulcers, seborrhea, eczema, psoriasis, and other skin problems. An infusion made from the plant is used to treat glandular fever, tonsillitis, hepatitis, cystitis, and urinary problems. The juice has a mild laxative effect and is a diuretic. Fresh or dried cleavers are anti-inflammatory, astringent, cleansing, and tonic. They relieve constipation and induce sweating.

Crab Apples, Malus

Identification

Crab apples, also known as wild apple, are compact ornamental trees that grow wild.

The genus contains up to 55 species of small deciduous apple shrubs and trees native to the temperate zone of the Northern Hemisphere.

Photo By Wehha - Own work, CC BY-SA 3.0

Edible Use

The fruit is a smaller, more sour version of the domestic apple. Eat them raw or sweeten them to make applesauce, pies, jelly and juice. The leaves can be used to make a tasty tea.

Medicinal Uses

Many parts of the crab apple tree are used as herbal remedies: The fruit is astringent and useful as a laxative. A poultice made from crushed fruit helps heal inflammations and wounds. The root-bark is useful against worms and parasites and as a sleep inducer. A root-bark infusion is used in the treatment of fevers.

The leaves contain antibacterial agents. Seeds of the crab apple contain toxic hydrogen cyanide, which has been claimed to be beneficial in the treatment of cancer, but they are poisonous in large quantities.

Curled Dock, Rumex Crispus

Identification

Curled dock grows wild in Europe, North and South America, and Australia. It is recognizable by its tall red stalks, growing up to 3 feet in height. Smooth leaves grow from a large basal rosette with wavy or curled edges.

Greg Hume - Own work, CC BY-SA 3.0

Flowers and seeds grow in clusters on the stem.

Edible Use

Peel and eat the stalk raw or boiled. The leaves are best boiled in several changes of water to remove their bitterness and oxalic acid. Harvest curled dock while young; the mature plants are much too bitter.

Medicinal Uses

Curled dock has been used as a gentle laxative for the treatment of mild constipation. It has cleansing properties and is used internally to treat diarrhea, piles, bleeding in the lungs, and chronic skin diseases. A poultice or salve made from the roots is used on wounds, sores, ulcers, and other skin problems. The root can also be dried and applied as a powder.

Dandelion, Taraxacum Officinale

Identification

This common weed has very small yellow-orange flowers which grow together on a composite flower head and appear to be one flower. The leaves are 2 to 10 inches long, lobed, and grow in a basal rosette from the

taproot. Both the stems and the leaves produce a sticky, white, milky sap when broken. The seeds form a puff ball which is easily dispersed by the wind. Dandelions are very similar to catsear, and can be distinguished by their unbranched, hairless, leafless, and hollow stems, which hold only one flower.

Edible Use

The entire plant is edible, including the roots. Young leaves are tender, but they develop a bitterness as they mature. Boil them in several changes of water to reduce the bitter taste. Boil the roots to eat, and drink the cooking water as dandelion tea. Eat the flowers raw as a garnish on your salad. Dandelions are also used to make wine.

Medicinal Uses

The dandelion is a common herbal remedy, effective as a cleansing agent, diuretic, laxative, tonic and as a potassium supplement. All parts of the plant can be used, but the root is most effective. It is also used to purify the liver, treat gallstones, urinary problems, skin diseases, gout, jaundice, and stomach upsets.

Elderberries, Sambucus

Identification

Elderberry shrubs grow to be 10 to 25 feet tall. The leaves are round, with serrated edges.

Identify the plant in the spring by the white flowers and harvest berries in the fall. Ripe berries can be black, red, white or yellow, depending on the species.

Edible Use

The elderflower blossoms and cooked elderberries are edible. Syrup made from the elderflower blossoms is used as a flavoring agent, and can also be diluted to make a drink. A fermented drink is also made from the flowers.

Berries must be cooked, and can be eaten in pies or coated in batter and fried. Uncooked berries and other parts of the plant, except for the elderflower blossoms, are poisonous.

Medicinal Uses

Black elderberry is used medicinally as a treatment for colds, flus, and allergies by reducing the swelling in mucous membranes and relieving congestion.

It is also applied to the skin to treat wounds. Elderberry contains antioxidants and may have anti-inflammatory, antiviral and anticancer properties.

Fiddleheads, Matteuccia Struthiopteris

Identification

Fiddleheads, also known as Ostrich ferns, grow in damp areas of North America in the spring. Some other species of ferns are also edible, but make sure you correctly identified the correct fern before eating it. Fiddleheads are the fronds of a young fern. Harvest them early, while the frond is still tightly curled.

Edible Use

Only the closed fiddleheads are edible. Cut them close to the ground, remove the brown husk, and wash them well. Boil them for 15 minutes or steam them for 10 to 12 minutes to kill the microbes that they sometimes harbor.

Medicinal Uses

Fiddleheads have antioxidants and are a valuable plant source of omega-3 and omega-6 fatty acids. An infusion can be used for gargling to relieve a sore throat. Leaves from the ostrich fern can be applied directly to the skin to treat wounds, infections, and boils.

Field Pennycress, Thalspi vulgaris

By Kristian Peters, CC BY-SA 3.0

Identification

Field pennycress grows wild in most parts of the world from early spring to late winter. It is a flowering plant from the Brassicaceae cabbage family.

Edible Use

The seeds and leaves of field pennycress are edible either raw or boiled. Be careful where you harvest field pennycress because it accumulates minerals and heavy metals from the soil.

Do not eat field pennycress grown in contaminated soils or near a road.

Medicinal Uses

Pennycress is used as a treatment for rheumatic disease and as a diuretic. The seeds are anti-inflammatory and useful for the treatment of fluid in the lungs, and also for fever. The entire plant has anti-bacterial properties and is useful as a blood tonic, as an expectorant and as a liver tonic.

It is useful in treating carbuncles, acute appendicitis, intestinal problems, menstrual problems, endometriosis, and post-partum pain. Use pennycress with caution; large doses can cause nausea, dizziness, and a decrease in infection-fighting white blood cells.

Fireweed, Epilobium Angustifolium

Identification

Found primarily in the Northern Hemisphere, this pretty, flowering plant is easily identified by its purple flower and the unique structure of the leaves.

The veins in the leaves are circular, rather than running to the edges of the leaves.

Edible Use

Eat the leaves of fireweed when they are young and tender or use them to make tea. Mature leaves are tough and bitter. The stalk, flowers, root and seeds are also edible. Scrape and roast the root for a tasty, but sometimes bitter, snack.

Medicinal Uses

Fireweed is used to reduce fevers, heal wounds to treat pain and inflammation. It is also used to treat tumors and enlarged prostates. It is considered a tonic and an astringent.

Foxglove, Digitalis Purpurea

Identification

Foxglove is a genus of approximately 20 different plants and shrubs. The plant is often grown as an ornamental flower for its vivid, tulip-shaped flowers. During the first year, only the stem and leaves are produced, followed by the plant flowers during the second year.

Edible Use

The plant is considered poisonous and should be used medicinally, only if your doctor prescr-

-ibes it.

Medicinal Uses

Digitalis is used as a treatment for atrial fibrillation, a common irregular heart rhythm, and is prescribed, under the drug name digoxin, for heart failure.

The dried leaves can be used, but taken in excess they can be deadly. An overdose will quickly induce vomiting and nausea to prevent the patient from consuming more. Foxglove should be used with care, and only if prescribed by a medical professional.

Garlic Grass, Allium Vineale

Identification

Garlic grass, or wild garlic, is a perennial species of the wild onion. The plant has a strong garlic odor and flavor.

Edible Use

Use it just like normal garlic. The leaves are edible raw or cooked. The bulb is small, but very flavorful.

Medicinal Uses

Allium Vineale is an anti-asthmatic, blood pur-

-ifier, diuretic and expectorant. For children it is used to treat colic and croup.

Eat the raw root to reduce blood pressure and ease shortness of breath. A tincture is used to treat worms. Garlic grass contains sulphur compounds which help reduce cholesterol levels and act as a tonic for the digestive and circulatory system.

Garlic Mustard, Alliaria Petiolate

Identification

Garlic mustard, also known as Garlic Root, Hedge Garlic, Sauce-alone, Jack-in-the-bush, Penny Hedge and Poor Man's Mustard, is a biennial flowering plant with clumps of slightly wrinkled leaves that smell of garlic.

Edible Use

The flowers, leaves, seeds, and roots can be eaten. To enjoy the best flavor, harvest the leaves in the spring; they grow bitter as the weather gets hot. Harvest the horseradish-flavored roots in the early spring or late fall.

Medicinal Uses

The leaves and stems of garlic mustard are useful in treating wounds. They are high in Vitamin C and are used internally to induce sweating and treat bronchitis, asthma and eczema.

Externally, use it as an antiseptic poultice to treat itchy bites and stings, to promote wound healing, and for treating ulcers and skin problems. An infusion of roots in oil can be used to make an ointment that relieves bronchitis when rubbed on the chest.

Gooseberry, Ribes

Identification

Gooseberry, also known as amla, is found in Europe, Africa, Asia, and in scattered locations around North America. Bushes grow up to 5 feet tall. Branches are grey with long red thorns. The leaves have 5 lobes with rounded edges.

Edible Use

The fruit ripens in late spring to early summer. Ripe fruit may be white, as in the photo above, or red. Gooseberries are edible, but very sour. While they can be eaten raw, most people prefer them in jellies, jams, pies, or in other preparations that contain sugar. The fruit can also be pickled or dried.

Medicinal Uses

Gooseberry, eaten daily, has proven benefits for the control of blood sugar in diabetics (when eaten without sugar) and pre-diabetics. It enhances food absorption, supports a healthy heart, fortifies the liver, balances stomach acid, and improves mental function.

It is high in Vitamin C and a powerful antioxidant. The leaves are used in many hair tonics to enhance hair growth and add shine. A paste of pounded or dried and ground leaves can be applied directly to the scalp and roots of the hair.

Indian Cucumber Root, Medeola Virginiana

Identification

Indian cucumber root is a member of the lily family that grows in the forests of the eastern United States. Shoots produce two layers of whorled leaves, however the second layer only grows in when the plant flowers. The lower leaves have between five and nine lance-shaped leaves, while the upper leaves have three to five ovate leaves. Yellow/greenish flowers appear in late spring, followed by dark blue/purple inedible fruit.

Edible Use

The plant and berries are not edible. The edible tuber has the smell, taste and crispness of a cucumber.

Medicinal Uses

The crushed and dried leaves and berries make an infusion that has been used as an anticonvulsive. The root is a diuretic and a laxative.

Green Seaweed, Ulva Lactuca

Identification

If you live near the ocean, look for fresh green seaweed in the water. Rinse it with fresh water, if possible, and let it dry.

Edible Use

Use it raw or cook it in a soup.

Medicinal Uses

Eating seaweed daily is considered to offer many healing benefits. Seaweed is rich in iodine and is helpful in the treatment goiter and other thyroid problems. It is also high in potassium, and is beneficial as a supplement for fibromyalgia, exhaustion, anxiety, and depression.

Because it is high in iodine, it is useful in preventing the adsorption of radioactive iodine in the case of a nuclear disaster.

Hazelnuts, Corylus Avellane

Identification

Deciduous hazel shrubs and trees grow to be 12 to 20 feet tall, with rounded, bright green leaves with double-serrated edges. Single-sex catkins of flowers grow during the very early spring, before the leaves. Female flowers are very small, with only the bright-red styles visible. Male flowers are a pale yellow and several inches long.

Edible Use

The nuts of all hazel trees are edible. Harvest them in mid-autumn when the trees drop their leaves and nuts. Eat the nuts fresh or dried as a snack, or use them to flavor baked goods.

Medicinal Uses

Hazel nuts are a source of vitamin E. The oil is used in the cosmetic industry and as a treatment for infection with threadworm or pinworm in babies and children. The bark, leaves, catkins and fruit are astringent and useful for inducing sweating and reducing fevers. They are also used to treat toothaches.

Hickory, Carya

Identification

The tree grows to a height of 50 to 60 feet, with pinnately compound, spear-like green leaves. The small, yellow-greenish flowers hang from catkins that appear in the spring. Hickory nuts grow enclosed in a husk which opens at maturity in the fall.

Edible Use

Hickory nuts are the edible fruit of the deciduous hickory tree. Eat them raw or cooked and store them over the winter in their shells.

Medicinal Uses

Small, fresh shoots of the shagbark hickory are steamed to make an inhalant useful for headache relief. Hickory bark tea has been

used to treat rheumatism, and can also be used externally in a poultice on rheumatic joints.

Jerusalem Artichoke, Helianthus Tuberosus

Identification

Jerusalem artichoke, also known as sunroot, sunchoke, earth apple or topinambour, is the tuber of the helianthus tuberosus plant.

The plant has rough, hairy leaves that alternate on the lower part of the plant, but are placed opposite one another on the upper part of the stem. The elongated tubers resemble a ginger root.

Edible Use

The tubers are a crisp addition to a slaw or salad, and can be eaten raw. Roasted tubers are used as a coffee substitute. They store well in a cool place and become sweeter the longer they are stored.

Medicinal Uses

Jerusalem artichoke is used as an aphrodisiac, diuretic, laxative, as a stomach remedy, and also as a general tonic. It is a folk remedy for diabetes and rheumatism.

Japanese Knotweed, Fallopia Japonica

Identification

Considered an invasive plant in some parts of the United States, Japanese knotweed looks like bamboo or a giant, reddish asparagus. It grows near waterways in sunny locations.

Edible Use

The stalks are edible, and at their best in the spring while they are still soft. The flavor is similar to a sour rhubarb, and you can use this plant as a substitute for rhubarb in recipes.

Japanese knotweed grows in large clumps and is easy to harvest, but do not eat it raw in excess or over a long period of time, seeing as it contains oxalates. Cooking destroys the oxalates and makes it safe to eat in quantity.

Medicinal Uses

Japanese knotweed contains powerful antioxidants that reduce inflammation. It is an excellent source of resveratrol, which is useful for its anti-inflammatory and anti-aging properties. It has also been used to lower cholesterol and prevent cancer. Used externally, it is beneficial for skin problems, burns, and wounds.

Joe-Pye Weeds, Eutrochium

Identification

Joe-Pye weed is a member of the sunflower family, sporting purple flowers. It is a perennial, growing up to 5 feet tall and flowering from July to September.

Edible Use

All parts of the plant are edible, including the root. Harvest the leaves and stems before the flowers open and dry them for future use. Harvest the roots in the fall. You can make an herbal tea with the fresh flowers.

Medicinal Uses

The plant has been used as a medicinal to treat a variety of illnesses including fevers, typhus, kidney stones, and other urinary tract illnesses.

Decoctions made from the root and flowers are diuretic and tonic. It is also used to soothe the nerves and to treat menstrual problems, impotence, indigestion, asthma, coughs, colds and headaches.

Kelp, Alaria Esculenta

Identification

Kelp is another seaweed, belonging to the brown algae, and can be found in most parts of the world. It consists of long, flat blades growing from stem-like stipes.

Edible Use

Like green seaweed, you can either eat it raw or use it in a soup.

Medicinal Uses

Kelp is a valuable source of iodine and is useful to treat goiter and other thyroid problems, and also protects against radiation poisoning. Iodine is important in female hormone regulation and supports the immune system. It also contains enzymes that help digestion. It has anti-inflammatory benefits and shows therapeutic potential for neurodegenerative diseases.

Caution: Some people are allergic to kelp and may experience symptoms such as rashes, hives, itchy eyes, runny nose, shortness of breath, or gastro-intestinal problems.

Kudzu, Japanese Arrowroot

Identification

If you have kudzu growing near you, it is an almost limitless source of food. Often found climbing over trees, shrubs, or even abandoned houses, the plant is fast-growing and considered invasive in most areas.

Edible Use

The entire plant is edible. The roots are starchy and can be eaten like potatoes, while the leaves are eaten raw or cooked like a green. Jelly or tea is made from the flowers.

Medicinal Uses

Kudzu is used to treat muscular aches, headaches and migraines, heart disease and angina, allergies, and diarrhea. Kudzu should not be taken by women if they are pregnant or breastfeeding.

Lamb's Quarters, Chenopodium

Identification

The plant is also known as goosefoot or pigweed, and grows in clumps of 6 to 9 feet tall plants. It has pale green, waxy leaves that are whitish on the underside. Caution: nettleleaf goosefoot is a poisonous plant that looks like lamb's quarters. They can be distinguished by the undesirable odor of nettleleaf goosefoot.

Edible Use

Harvest lamb's quarters when the leaves are young, before the flowers appear. If consistently harvested, they can be eaten throughout the summer, until the first frost.

The leaves contain oxalic acid, so eat them raw in moderation or cook them like spinach to destroy the oxalic acid. The leaves can also be dried and powdered to make flour.

Medicinal Uses

Lamb's quarters are high in vitamins and minerals. It is one of the most nutritious wild foods.

The plants can be made into a poultice to relieve pain from rheumatism and arthritis, and also to relieve swelling and inflammation. Chew raw leaves to relieve toothaches.

Mayapple, Podophyllum

Identification

Mayapple, also known as American mandrake, wild mandrake and ground lemon, grows wild

in most of the eastern United States and south-eastern Canada. The plants grow in clusters originating from a single root.

Edible Use

The plant is extremely poisonous, including the green fruit. The fruit becomes edible when it is fully ripe and has turned yellow and has softened.

Remove the seeds before consuming. Be careful when handling the plant; the toxins can be absorbed through the skin.

Medicinal Uses

Mayapple plant is poisonous and should not be eaten. While it has been used as an herbal remedy and to induce miscarriages, it is easy to overdose and poison the patient.

Mustang Grapes, Vitis Mustangensis

Identification

Mustang grapes, also known as wild grapes, are common along riverbanks and in moist locations throughout the south-eastern United States. The vines are woody and produce small cluster of grapes that ripen into dark purple grapes from August until September.

The skin of the grape is thick. The leaves are easily recognized by the white velvet-soft underside of the leaf.

Edible Use

The fruit are extremely acidic, but very tasty when used in jelly or as a juice, sweetened with sugar. It is also a popular fruit for winemaking. The leaves are often eaten in “dolmades”, cooked and stuffed with a mixture of rice, meat and spices.

Medicinal Uses: No known use.

Miners Lettuce, Claytonia Perfoliate

Identification

It is also known as Indian lettuce, spring beauty, or winter purslane. Look for miner’s lettuce in cool, damp areas.

This herbaceous annual grows from a rosette at the base. Small pink or white flowers appear in the early spring until early summer.

Edible Use

The flowers, leaves and roots of miner's lettuce are all edible either raw or cooked like spinach. The young leaves are fairly bland, but the flavor becomes more bitter as the leaves mature. The roots are also edible raw or cooked. Although small, and a chore to harvest, the root bulbs have the flavor of chestnuts when boiled and peeled.

Medicinal Uses

The plant is rich in vitamin C and can be used as a tonic, diuretic, or a gentle laxative. A poultice made from macerated plants is used to relieve the pain in rheumatic joints.

Monkey Flower, Erythranthe

Identification

Erythranthe, also known as musk flower, is a diverse plant genus. The plants are usually annuals or herbaceous perennials with red, pink or yellow flowers. They often grow in damp or wet soils.

Edible Use

Harvest monkey flower stems and leaves before the flowers appear for best flavor. The flowers are also good in salads or used as a garnish. Use monkey flower leaves raw or cooked like greens.

Medicinal Uses

Erythranthe is listed as one of the plants used to prepare Bach flower remedies.

Caution: Monkey flower species tend to concentrate salts in their leaves and stems. Early travellers used them as a salt substitute. Several species of Erythranthe are listed as threatened; identify the plant to make sure you are allowed to harvest it before picking it.

Pecans, Carya Illinoinensis

Identification

The pecan is a large deciduous tree, growing up to 100 feet tall. They have alternate leaves, 12 to 18 inches long and pinnate, with 9 to 17 leaflets.

Edible Use

The seeds, technically a fruit, but widely considered a nut, are edible. Most people are familiar with the pecan nut, but may not recognize it when it's covered by its husk. The husk opens and releases the nut to fall to the ground when ripe. Gather nuts from under pecan trees in the fall.

Medicinal Uses

The bark and leaves of the pecan tree are astringent. A decoction made by boiling the bark was used to treat tuberculosis. The crushed leaves can be rubbed on the skin as a ringworm treatment.

Persimmon, Diospyros Virginiana

Identification

Tduk Alex Lozupone - Own work, CC 3.0

Persimmon trees grow throughout the south-eastern United States, usually in open woods or fields. The tree is usually about 15 to 30 feet tall, but can grow to a height of up to 80 feet. It has oval leaves and male and female flowers on separate short stalks.

Male flowers grow 16 flowers per stem, arranged in pairs, while female flowers grow a single flower on each stem. The fruits are usually small, about 1/2 inch in diameter, and bright orange when they ripen in the late fall.

Edible Use

Gather the fruit when they are soft and fully ripe. Eat them fresh or use the pulp in jelly, breads, cakes and pies. You can substitute persimmon pulp in any recipe calling for banana pulp.

Dried persimmon leaves make a delicious tea that is rich in vitamin C, and the roasted seed is used as a coffee substitute.

Medicinal Uses

Teas made from persimmon leaves act as a diuretic and help reduce high blood pressure. They are also useful as an anti-inflammatory for arthritis or gout.

Infusions or decoctions of the persimmon tree bark have antiviral and anti-bacterial properties, and are useful for treating colds, coughs and the flu.

Externally, the infusions of leaves or root decoctions are used to disinfect wounds and help healing. They can also be applied to reduce pain and inflammation, including the inflammation of hemorrhoids.

The unripe persimmon fruits are very astringent and can be used to treat diarrhea. Eating the ripe fruit helps lower cholesterol.

Pine Trees, Pinus

Identification

Pine trees are evergreen conifers growing anywhere from 10 to 260 feet tall. Most pines have thick, scaly bark, but a few have thin, flaky bark. Branches grow in a tight spiral, producing needles and seed cones.

Edible Use

The soft, white, inner bark of all pine trees is edible. It can be eaten raw or dried, and can also be ground into a powder to use as flour or as a thickener in cooking. Young, green pine needles can be steeped in boiling water to make a tea that is rich in vitamins A and C.

All pine trees bear edible nuts, but most are very small. They are a good source of protein, fat, and carbohydrates. Harvest pine cones at the end of summer or early fall, before the cones have opened. Wear gloves and old clothes, because the pine sap makes a sticky mess. Gather unopened or half-opened cones from the tree, pulling them off the branches or knocking them down with a stick. Cones on the ground usually will have already opened and released their nuts.

Pick the nuts out of half-opened cones immediately, then shell them and toast them or eat them raw. Put the unopened cones in a burlap or fabric sack through which the air can flow well, and hang them outside to ripen. The first freeze will force the cones to open enough that you'll be able to pick the seeds out.

If you don't want to wait, bury the closed cones in the ashes of a hot fire and allow the heat to crack open the cones. Don't try to put them directly into the fire, seeing as they can explode, throwing bits of hot nuts all over the place.

Medicinal Uses

Pine sap is a natural disinfectant and antiseptic with antimicrobial and antifungal properties. Apply it directly to wounds to stop blood flow and to disinfect the wound.

Pineapple Weed, Matricaria Discoidea

Identification

Pineapple weed, also known as wild chamomile and disc mayweed, is an annual from the Asteraceae family which grows between 2 to 16 inches tall. Cone-shaped flowerheads holding densely packed yellowish-green corollas appear from March to

September. The crushed flowers have a definite pineapple and chamomile scent.

Edible Use

Pineapple weed flowers and leaves are edible raw in salads or can be brewed to make an herbal tea.

When crushed, the flowers have the aroma of pineapple and chamomile. The plant has also been used for medicinal purposes to relieve upset stomachs and fevers, and also for fighting infections.

Medicinal Uses

Pineapple weed is rarely used medicinally, although it has been used in the past to treat intestinal worms, and also as a sedative.

Plantain, Plantago

Identification

This is not the banana-like fruit, but a green plant that grows in wetlands, marshes, bogs, and alpine forests. The oval leaves have vertical ribs, and can grow up to 6 inches long and 4 inches wide.

Edible Use

The leaves are edible at all times, but they grow more bitter as they mature. Use them raw in salads or cook them as a pot herb.

Medicinal Uses

Plantain roots are used in a wide range of remedies, including stomach upsets, peptic ulcers, diarrhea, irritable bowel syndrome, hemorrhoids, cystitis, bronchitis, sinusitis, asthma, coughs, and hay fever. It causes a natural aversion to tobacco and is used in smoking cessation programs. The root is also rumored to be an anti-venom for rattlesnake bites.

Heated leaves made into a compress are useful for skin inflammation, wounds, ulcers, stings and inflammation.

Ground plantain seeds act as a laxative and are used for the treatment of parasitic worms.

Prickly Pear Cactus, Opuntia Compressa, O. Drummondi, and O. Vulgaxis

Identification

Prickly pears are a cactus species that grow in the western part of America and in the coastal

plain region of the south-eastern United States. They are native to sandy or rocky soil.

Edible Use

Prickly pear cactus produces a red or purplish fruit that is covered with tiny spines. You definitely want to wear gloves and handle this fruit with care.

The spines are easily removed by securing the fruit in a pair of tongs and holding it over a small flame to burn off the spines. Use prickly pear fruit to make jelly or jam, or cook it to extract a nutritious juice.

The green cactus pads, called nopal or nopales, can also be eaten. Scrape the bristles off with a knife and trim the pad around the edge. Boil the pads for 10 to 15 minutes and eat them as a vegetable.

Medicinal Uses

Used fresh, the leaf pads are a diuretic and can be used in a poultice on skin sores and infections. The fruit is packed with antioxidants and is an anti-inflammatory.

Self-heal, Prunella Vulgaris

Identification

Prunella vulgaris, also known as self-heal or heal-all, grows 2 to 12 inches high, and has creeping stems that root where they land. The stems are square, with leaves growing in opposite pairs. Leaves are elongated, with serrated edges and a reddish tip.

Edible Use

Self-heal is entirely edible. The young leaves and stems are good raw, but the whole plant can be cooked and eaten also.

Medicinal Uses

The plant is used medicinally to make a dressing for wounds, ulcers, sores, and other skin problems. A tea made from the plant can be used to treat fevers, diarrhea, internal bleeding, nephritis, and goiter. The plant is antibacterial, antiseptic and astringent. Harvest it mid-summer and use it fresh, or dry for later use.

Purslane, Portulaca Oleracea

Identification

Purslane, also known as verdolaga, pigweed, little hogweed, red root, and parsley, is a succulent plant with smooth, flat leaves. It

grows from early summer through fall and may grow to a size of up to 16 inches in height.

Edible Use

Eat it raw or boiled. The leaves have a sour taste and contain oxalate, but both of these aspects are reduced by boiling.

Medicinal Uses

Purslane is used to treat and prevent a wide variety of illnesses, including cataracts, dysentery, heart disease, asthma, cardiac arrhythmia, intestinal worms, gum disease, multiple sclerosis, psoriasis, stomach aches, headaches and depression. It is rich in vitamins A, C, and E, as well as in calcium and magnesium, and is thought to boost the immune system.

Red Mulberry, Morus Rubra

Identification

Red mulberry trees are native to the eastern and central United States. The tree is deciduous, growing up to 70 feet tall. The leaves are alternate, with a sandpaper-like upper surface.

Edible Use

Red mulberry fruits look a lot like ripening blackberries, but they are less tart. Watch for them to ripen in the late spring until early summer. Pick them as soon as they are ripe or you will have to compete with the local birds.

Medicinal Uses

Tea made from the roots of red mulberry trees is effective against parasitic worms, tapeworms, dysentery, and urinary problems. The sap is useful to treat ringworm. The fruit helps reduce fevers.

Rose, Rosaceae

Identification

Roses are a large family with thousands of cultivars. They grow as shrubs and vines, and usually have thorns. Flowers are large and often fragrant.

Edible Use

The flower petals and rose hips produced by many garden roses are edible. The petals plucked from open blooms are used to make tea, syrup, rose water, and can also be used as flavoring in foods.

Rose hips, the mature seed pods from the rose flower, are used to make jams, jellies, marmalades, soups and teas.

Medicinal Uses

Rose hips, leaves, petals and roots have been used for a wide variety of remedies, including treatments for colds, the flu, fevers, diarrhea, and other stomach issues. Rose hips are highly valued for their vitamin C content.

A boiled tea made from the hips or roots has been used to treat eye infections and inflammations. The FDA has designated the rose flowers, fruits (hips), and leaves of Rosa alba L., Rosa centifolia L., Rosa damascena Mill., and Rosa gallica L. as "Generally Recognized as Safe".

Seneca Snakeroot, Polygala Senega

Identification

Seneca Snakeroot, also known as Senegaroot or Rattlesnake root, is a perennial herb in the milkwort family. It is named in honor of the Seneca people, who used the plant as a treatment for snakebites. The plant grows to be 20 inches tall, with many unbranched stems. Lance-shaped leaves alternate with smaller, lower leaves. The small, pea-like, white or greenish flowers grow on a spike. The root has a scent reminiscent of wintergreen and a pungent flavor.

Edible Use

The plant and root are good for medicinal use only, and are not edible. Large doses are poisonous.

Medicinal Uses

Seneca snakeroot is most commonly used as an expectorant for respiratory problems such as colds, croup, and pleurisy. Root tea was also used for pneumonia, bronchitis, whooping cough, asthma, and to calm the mucous membranes. The plant is still used as an herbal remedy for respiratory problems.

Root tea is an emetic, induces perspiration, and helps regulate menses. It has also been used to treat rheumatism, heart problems, convulsions, and inflammation. The Seneca people chewed the root and applied the mash to snakebites after sucking out the poison, hence the name of the plant.

Sheep Sorrel, Rumex Acetosella

Identification

Sheep sorrel is found in the highly acidic soil of fields, grasslands, and woodlands in Europe, Asia, and North America. The plant has a reddish stem that grows up to 18 inches tall, and has green arrow-shaped leaves.

Edible Use

Sheep sorrel can be eaten raw, but it contains

Edible Use

Sheep sorrel can be eaten raw, but it contains oxalates, so either cook it or eat only in small quantities. It has a tart, lemon-like flavor. Sheep sorrel can also be used as a curdling agent in cheese-making.

Medicinal Uses

The fresh juice of sheep sorrel is a diuretic and is considered detoxifying. It has a mild laxative effect and is used for stomach problems and to expel worms. A root decoction has been used for excessive menstruation, stomach ulcers, and diarrhea.

A tea from the leaves can be used externally to treat boils, abscesses, sores and other skin diseases. Used as a poultice, the leaves reduce inflammation.

Spikenard, Aralia Racemosa

Identification

Spikenard, also known as American spikenard, Petty Morel, Indian Root, spice berry, and Life-of-man, is an herbaceous plant which grows up to 4 feet tall in moist soil and partly shaded areas.

It is found mostly in the eastern part of the United States. It bears hermaphrodite flowers in early summer.

Edible Use

The fruit, leaves, young shoots, and root are edible, and are mostly used as a flavoring due to its liquorice flavor, but they are also used for making root beer. It can be eaten cooked as a green vegetable. The fruits are tasty when eaten raw or cooked.

Medicinal Uses

American spikenard has been used as a healing plant for thousands of years. The root's antiseptic, diuretic, detoxifying, and diaphoretic properties make it useful as a purifier, and also for treating a variety of conditions including coughs and respiratory illnesses, rheumatism, and gout.

Applied externally as a poultice, it is used to treat skin problems and rheumatism. The roots can be collected in the summer and fall and dried for later use.

Spruce, Picea

Photo by MPF, CC-SA 3.0

Identification

The spruce is a coniferous evergreen tree. Branches are whorled and produce needles attached in a spiral form. It is covered with scaly, reddish-brown bark and grows to heights of anywhere from 60 to 200 feet tall.

It produces yellow or red male catkin-like flowers and bright purple female flowers in the spring. The resulting seed cones are oblong.

Edible Use

All parts of the spruce tree are edible. The needles are used to make tea, and the inner bark and green cones are palatable, although they are a little bitter.

For a quick snack, chew on a sprig of new growth in the spring. Spruce is a valuable source of vitamin C during the winter months, when little else is growing.

Medicinal Uses

The young shoots and leaves are most often used medicinally. A tea made from young shoots reduces fevers and promotes sweating. It is used to treat coughs, colds, and the flu, and the inhaled vapors are used for bronchitis. Use the pitch from spruce trees as an external treatment for wounds, ulcers and sores.

Tea made from shoots or leaves is used for treating bladder infections, scurvy, and gonorrhea, and also as a general cleansing tonic.

Sunflower, Helianthus Annuus, Common Sunflower

Identification

The sunflower is an annual plant in the Asteraceae family, known for its huge flowering head. The plants are annuals or perennials, growing up to 10 feet tall or more.

The flower heads have bright yellow ray florets around a yellow or maroon disc with florets

inside. The plant tilts to face the sun during the day, until the flower grows, after which they usually face east. Seeds are produced on the disc. The ray flowers are sterile.

Edible Use

In addition to the popular sunflower seeds, the leaves, flowers and stems are also edible. The seeds are eaten raw or cooked, and can be roasted to make a coffee substitute. Young flower buds are best steamed, while the leaves and stalks can be boiled and served as a green vegetable.

Medicinal Uses

A tea made from the leaves is used to treat coughs and fevers, and can also be used to treat malaria and lung diseases. Crushed leaves are used on skin wounds, sores, stings and snakebites.

Sweet Rocket, Hesperis Matronalis

Identification

Sweet rocket, also known as Dame's Rocket, is a member of the mustard family and is known by many names.

Often mistaken for phlox, its flowers have four petals, while phlox flowers have five. The plant produces a mound of hairy foliage the first year and flowers in the second spring.

Edible Use

Harvest sweet rocket before the plant flowers. Young leaves are best used as salad greens.

Seeds can be allowed to sprout, thus obtaining micro-greens, and can be used in salads.

Medicinal Uses

Harvest leaves while the plant is flowering and dry them. The dry leaves can be used as a diuretic and to induce perspiration. They are rich in vitamin C and are useful in preventing scurvy.

Tobacco, Nicotiana Tabacum

Identification

Tobacco is an annual herbaceous plant of the Solanaceae family. Some Nicotiana species are cultivated as ornamentals, but most are grown for tobacco leaf production. The plant grows to

a height of 4 feet and flowers from July to September.

Edible Use

While protein extracts can be made from the leaves, it is highly toxic in its natural state, even in small amounts. All parts of the plant contain nicotine, which is the addictive substance in tobacco.

Medicinal Uses

Tobacco has a long history as a medicinal plant, commonly used as a relaxant. The leaves are used externally to treat skin diseases, scorpion stings and bug stings. Do not ingest the plant. It is an addictive narcotic and extremely toxic.

A homeopathic remedy made from dried leaves is used to treat nausea and motion sickness. The leaves are a diuretic, expectorant, irritant, narcotic, sedative and antispasmodic.

Violets, Viola Papilionacea

Identification

Violets are easily identified by their flowers and by their heart shaped leaves.

Edible Use

The flowers and leaves are both edible. The flowers are often used by chefs as a garnish for salads and cakes, and can be made into a tea or syrup. Similar to spinach in flavor, the leaves are used raw in salads or cooked as a green.

Medicinal Uses

Violets and their extracts have been used experimentally to treat tumors in mice, but no human tests have been done. The leaves and flowers are beneficial as an expectorant to treat coughs, colds and bronchitis.

A tea made from the leaves is beneficial for insomnia and can also be used as a laxative. Violet leaves have also been reported to have antiseptic and pain-relieving effects. Use a tea or compress to relieve headaches and neck pain. Use in a poultice or in ointment form to relieve sores and treat skin problems. A poultice or ointment can also relieve symptoms and heal wounds.

Walnuts, Juglans

Identification

Walnut trees are deciduous, reaching heights of up to 130 feet, with pinnate leaves that grow in clusters of 5 to 25 leaflets. Leaves and

blossoms appear in mid-spring and the nuts ripen in the fall.

Edible Use

The nuts of the walnut tree are edible and are considered a good source of healthy oils and protein. Walnuts can be pickled in vinegar while still green in their husks, or can be allowed to ripen on the tree to eat shelled, as a nut.

Store the nuts in a cool, dry place to prevent mold and spoilage. The leaves can be used to make tea, and the sap can be tapped in the spring to make syrup or sugar.

Medicinal Uses

Walnut leaves are used internally to purify the blood and to treat constipation, stomach upsets, nausea, diarrhea, coughs, and asthma.

The nuts and leaves are also used externally to treat skin diseases, eczema, wounds, and sores. The walnuts are diuretic and a stimulant, and have been used to treat urination problems, back pain, and weakness in the legs. Oil from the seed is used to treat dry skin and parasitic worms.

Watercress, Nasturtium Officinale

Identification

Watercress, a member of the Brassicaceae family, is a rapidly growing aquatic perennial with a spicy flavor. The stems are hollow and allow the plant to float. If left to grow, it can reach a height of 4 feet. Despite the botanical name, watercress should not be confused with the nasturtium flowers.

Edible Use

Use the leaves and stems raw in salads, sandwiches and in soups. Sprout the seeds for their edible shoots. The leaves are best harvested before the plant begins to flower and the foliage turns bitter.

Caution: Watercress grown where excrements are present can host parasites, so look for plants grown in clean water.

Medicinal Uses

Watercress is used to treat respiratory illnesses such as coughs, colds, bronchitis, a runny nose, sore throats, and fevers. It has diuretic properties that help reduce edema and also help lower blood pressure. It has also been used throughout history to treat metabolic diseases, purify the blood, and also as a general tonic.

White Mustard, Sinapis Alba

Photo by SuperJew – Own Work, CC 3.0

Identification

White mustard is an annual that grows over 2 feet high, and has pinnate leaves. It blooms in the early spring, producing hairy seed pods. White mustard seeds are hard, round seeds, growing approximately 6 in a pod.

Edible Use

The seeds, flowers, and leaves are edible. Harvest the seeds when the pods are just beginning to ripen, and before they burst. Use the seeds for pickling or grind them and mix them with vinegar to make a mustard condiment. The leaves can be prepared as mustard greens.

Medicinal Uses

Mustard seeds are known to be antibacterial, antifungal, an expectorant, and diuretic. It is mostly used externally as a poultice, or added to bath water to treat coughs, tuberculosis and pleurisy. The seeds are irritating the mucous membranes and the skin, so dilute them and use carefully.

Wild Black Cherry, Prunus Serotine

Identification

Wild black cherry trees, also known as rum cherry, black cherry, or mountain black cherry, grow to be 50 to 80 feet tall. They have a dark grey bark with a reddish inner bark. The leaves are lance-shaped, with toothed margins. The small white flowers appear from April to June. Each flower has 5 petals and grows in bunches of several dozen flowers.

Edible Use

The edible cherries are reddish-black when ripe. Eat only ripe fruit. Do not eat the overripe fruit on the ground, and cook all fruit before eating. The taste is sharper than that of sweet cherries, but appealing. Use the fruit to make jam, pies, pastries, and also as flavoring.

Photo by Botteville – Own Work

Medicinal Uses

Steep the bark in hot water, but do not boil. Use it to treat coughs, fevers, colds, the flu, whooping cough, bronchial spasms, bronchitis, pneumonia, asthma, laryngitis, and sore throats.

It is also used to treat high blood pressure and poor circulation, relieve inflammation, and reduce edema.

Wild Leeks, Allium Tricoccum

Identification

Wild leeks, also known as ramps, spring onion, wood leek and wild garlic, are a perennial plant with broad leaves and a white bulb at ground level. They grow in closely-packed groups and smell like onions and garlic, and also have a similar flavor. Wild leeks are similar to the poisonous lily-of-the-valley, so be sure you identify them correctly.

Edible Use

Collect wild leeks in the early spring, taking only what you need and leaving the rest to replenish the supply. Eat the leaves and bulbs in salads or cooked. In many places, the harvesting of wild leeks is limited by law, so check your local laws before picking them.

Medicinal Uses

Use wild leeks the same way you would use garlic or onions for colds and croup, and also as a spring tonic. The warmed juice of the leaves and bulbs is used for earaches.

Wild Potato-Vine, Ipomoea Pandurata

Identification

An Herbaceous perennial, the wild potato-vine grows in woodland areas. It is also known as man of the earth, wild potato vine, manroot, wild sweet potato, and wild rhubarb, and produces white funnel-shaped flowers (morning-glory) with a reddish or purple throat.

The thin, heart-shaped leaves are 3 to 6 inches long. Unlike other morning-glories, it has ridged sepals and an enlarged root that can grow to be several feet long, 5 inches in diameter, and weigh up to 30 pounds.

Edible Use

The large tuber is used as a food source or as a medicinal. Roast it to eat like a potato.

Medicinal Uses

Use the cooked root to prepare a pain-relieving poultice for aching joints. Raw roots are used in small quantities as an expectorant, diuretic, and laxative.

Wild Plum, Prunus Americana

Identification

The perennial wild plum grows as a large bush or small tree up to 25 feet tall. It is also known

as American plum or yellow sweet plum. The tree spreads through the roots, creating groups of thorny bushes.

The alternate leaves are simple and oval or oblong in shape. They are 3 to 4 inches long and pointed at the tip. Fragrant flowers appear before or at the same time as the first leaves in the spring.

Fruits are small, approximately 1 inch in diameter, with a single rounded pit.

Edible Use

Look for ripe plums in the fall. The fruit is yellow-reddish to red when ripe. The fruit is sweet and sour, suitable for eating fresh or for making preserves, jelly, jam and wine. It can also be dried for later use.

Medicinal Uses

The bark of the wild plum has been used to treat coughs, and to make a tea that treats kidney and bladder infections.

Wild Yam, Dioscorea Villosa

Identification

The wild yam, also known as colic-root, rheumatism root, and Devil's-bones, is a climbing vine common in the eastern United States. It grows in damp locations, including swamps, thickets, damp woods and near ditches.

It has a smooth, reddish-brown stem and heart-shaped leaves with prominent veins running from the centre-top of the heart to the edges in a fan pattern.

The long, branched root is woody and forms tubers with a brown skin and a white, fibrous centre.

Edible Use

The tubers are edible, although bland. Gather them in the fall and cook them with seasoning to improve the flavor.

Medicinal Uses

The tubers of wild yam contain chemicals similar to progesterone, estrogen, and steroids used as contraceptives.

Components of the plant are used in the chemical manufacturing of hormones.

A decoction of the root is often used as a natural hormone therapy for PMS, menstrual cramps, symptoms of menopause, and for increasing sexual drive and energy in both men and women.

It also has anti-inflammatory and anti-spasmodic properties, and acts as vasodilator.

Wintergreen, Gaultheria Procumbens

Identification

The American Wintergreen is the shrub originally responsible for the wintergreen flavor used in chewing gum, mouthwashes, toothpaste, candies and other mint flavored foods. Stems of the shrub creep along the soil and send up branches 2 to 6 inches tall.

The alternate, oval leaves are leathery, with serrated edges. The leaves and the bell-shaped flowers grow near the top of the branches.

Flowers appear from spring through summer, the berry-like fruit appearing afterwards. The plant has the taste and scent of wintergreen.

Edible Use

The berries and leaves are edible in moderation and are mostly used as a flavoring.

Medicinal Uses

American wintergreen is used medicinally for various aches, pains, and also for fever. The leaves contain methyl salicylate, which metabolizes into salicylic acid, also known as aspirin.

They can also be used as a tea. Wintergreen has been used as a poultice to stop bleeding and to treat dog bites, snakebites, insect bites and other sores and wounds. It is an analgesic, diuretic, antiseptic, anti-spasmodic and anti-rheumatic.

Witch Hazel, Hamamelis Virginiana

Identification

Witch hazels, also known as winterbloom, are deciduous shrubs that grow up to 40 feet tall, but most of them are under 25 feet. Its alternating oval leaves are 2 to 6 inches long and 1 to 4 inches wide.

The current year's flowers bloom as the previous year's fruits mature.

Edible Use

The plant is potentially toxic and should not be eaten.

Medicinal Uses

The leaves and bark are used to produce the astringent decoction used externally in herbal medicine and skin care products. It is commonly used as an herbal remedy to treat diaper rash, sores, bruises, psoriasis, eczema, poison ivy, bug bites, and burns.

It is also used to reduce swelling, especially after childbirth.

A tea made from the leaves and bark has been used topically for hemorrhoids and ulcers. It can also be used as a gargle for a sore throat and as a rinse for mouth sores.

Wood Sorrel, Oxalis

Identification

Wood sorrel is an annual or perennial that grows approximately 3 inches high. The species is sometimes called false shamrocks for its arrangement of 3 heart-shaped leaves that are similar to clover leaves.

The white, pink, red or yellow flowers have 5 petals and 10 stamens.

Edible Use

Wood sorrel is a commonly used plant.

The roots are starchy and taste somewhat like a potato when boiled. The leaves and stems are edible raw or cooked and can be chewed to alleviate thirst.

The leaves, which have a lemon-like taste, can be dried to make a tasty tea. The leaves contain oxalic acid and should be cooked if they are eaten in large quantities or on a regular basis.

Medicinal Uses

Wood sorrel has been used as an aphrodisiac and as a treatment for fever, cramps, nausea, mouth sores and sore throats. The leaves are rich in vitamin C and can be used to prevent scurvy.

Yaupon, Ilex Vomitoria

Identification

Yaupon holly, also known as cassina, is an evergreen shrub commonly used as an ornamental plant in the southeastern part of the United States. The mature plant stands at a height of 16 to 30 feet tall, with a smooth, gray bark and thin, hairy shoots. The alternate leaves are dark green and glossy on top, and lighter in color on the underside. The fruits are small, red or yellow berries containing 4 pits each.

Edible Use

The leaves are used to brew a black tea that contains caffeine and theobromine. It can be used as an acceptable coffee substitute. The fruit is poisonous.

Medicinal Uses

A thick decoction of the leaves induces vomiting.

Yellow Birch, Betula Alleghaniensis

Identification

It is also known as golden birch. Identifiable by its golden-bronze exfoliating bark and the wintergreen scent released when you scrape one of its twigs, the yellow birch is a valuable survival plant found in the eastern part of the United States.

Edible Use

The inner bark, sap, young twigs, and leaves are all edible. The inner bark can be eaten cooked. Dried and ground into a powder, it can substitute some of the flour used in baked goods. Tea can be made by steeping the twigs and inner bark.

Harvest the sap in early spring to use as a drink, concentrate it into a syrup, or ferment it into a beer.

Medicinal Uses:

The plant is rarely used medicinally, although

a decoction made from the bark has been used as a blood purifier.

Yellow Rocket, Barbarea

Identification

Yellow rocket, also known as winter cress, American cress, Belle Isle cress and scurvy cress, grows along rivers, streams, creeks and other wet areas. It is a perennial, and can grow up to 1 foot in height.

Edible Use

Harvest the leaves when young and eat them raw or lightly cooked. Older leaves can be eaten, but they are very bitter. Cook them in several changes of water to reduce the bitterness. Unopened flower heads can be steamed like broccoli.

Medicinal Uses

The leaves of yellow rocket are used to make a poultice for treating wounds. Use the leaves to make a tea with diuretic properties.

This book was conceived to help you build a long-lasting nutrient rich stockpile using the time-tested foods of our grandparents from a time when there was no refrigeration. If you are concerned about your family's future, about the next crisis or widespread food shortages then this book is for you!

Compared to our grandparent's generation most of us are ill prepared today. We rely too much on refrigerators and supermarkets and too little on ourselves. Most of us today are at the mercy of others, but we just don't realize it yet. Until now, some of these powerful survival foods that made our grandparents so self-reliant, have been lost to history. I know that for a fact because before writing "The Lost Superfoods" I had been looking everywhere for a book like this one.

So, I hope you'll make good use of these superfoods I've managed to save for you and begin building the most inexpensive yet nutrient rich and long-lasting food stockpile you can ever imagine.

That's how you can keep your family safe when all hell breaks loose and food becomes the most sought-after item.

Your friend,
Art Rude