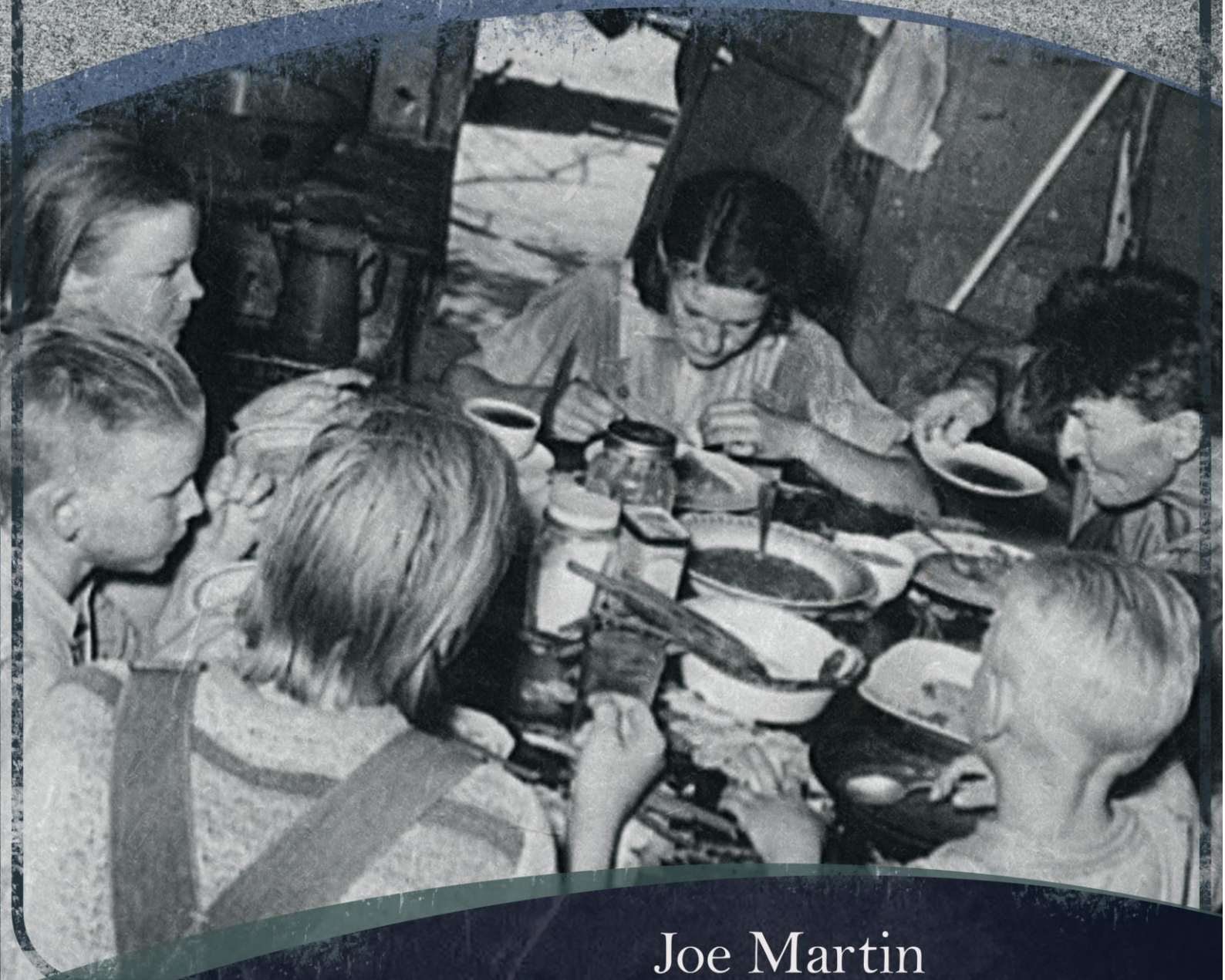
EFFICIENT SURVIVAL STRATEGIES FROM REAL PEOPLE WHO MADE IT THROUGH

THE GREAT DEPRESSION



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Introduction

Who isn't worried about the risk of another economic crash? The global financial crisis of 2008 was bad enough, but many fear that it was just an outrider of an even bigger crash to come. The global economy is still shaky, the growth of eastern exporters could damage American industry, and the US government's own bloated spending programs are creating a debt timebomb that no politician has the guts to go near. What's going to happen to our affluent, complex society if a really serious financial crisis hits?

Luckily, history has some lessons here. The Great Depression started in the US stock markets on September 4, 1929 and quickly spread round the world. The global economy shrank by 15% and a quarter of Americans were unemployed. Finance, industry, agriculture… every part of the economy was devastated, and millions were thrown into poverty.

This was a tougher generation, though, and they didn't give up. Instead people used every skill they had to save money, keep themselves fed and slowly rebuild the country. Many of the worst affected were farmers; others were rural people, used to taking advantage of natural resources. They could make many things that we now rely on stores to provide, and that meant they could get by on much less income than the average person today.

If you want to maximize *your* chances of surviving the next financial crisis, a good place to start is by relearning the skills that served people so well in the 1930s. They might seem archaic, even primitive – but they work. If you rediscover the lost ways of our ancestors you'll be able to eat better and more cheaply; you'll know how to cook without running up your utility bills; you'll be able to fix things instead of throwing them away and replacing them; you'll be able to make household essentials from cheap ingredients instead of adding them to your grocery bill.

Most of today's economic threats are 21st century ones. Hacking, identity theft, globalization – they're modern issues. But when the crisis hits its effects on ordinary people will be the same as they've been throughout history; poverty, malnutrition, even homelessness. And if the effects are the same, the old solutions will still work, too. That's what this book is all about.

Chapter 1.

Save Money on Food

The grocery bill for the average American is more than $75 a week. Even if you follow the USDA's "Thrifty Food Plan" you'll still be handing over more than $50 a week just to keep yourself fed. That's a lot of money – and in an economic crisis it could be money that you just don't have. With mass unemployment, rising inflation and collapsing government assistance, there's no way you can guarantee you'll be able to buy those groceries.

This is the situation millions of people found themselves in during the Great Depression. Some of them had a choice between keeping a roof over their heads or buying food; some couldn't afford either. Luckily many of them were farmers and rural people, and they knew where to find food that was free for the taking.

That's right – there is free food all around you, if you know where to look. Every part of the USA has a rich variety of edible wild plants that you can harvest and eat without it costing you a penny.

Most people don't forage for food anymore. It's a lot more time-consuming than farming, even if you're just keeping a small plot to keep yourself supplied with fresh vegetables. In a crisis, though, everything changes. What if you don't have land for a plot, or you've been forced to move and haven't had time to start planting yet? In those conditions, foraging makes a lot of sense.

Foraging isn't difficult and, while it takes time, it doesn't need a lot of strength or skill. Almost anyone can do it – so you can teach your kids to forage for some simple items while you get on with hunting or working in your vegetable plot. Foraging can be done in any spare time you get, giving you an effective way to add to your diet.

Is foraged food worth eating?

We're used to vegetables that have been selectively bred for hundreds, even thousands, of years for taste and nutritional value, so you might be wondering how wild food compares. Does the energy needed to collect it outweigh the energy and nutrients it contains – basically, is it even worth eating?

Well, some isn't. Grass, for example, isn't worth the bother of collecting. There's a reason cows have complicated digestive systems and spend pretty much all their time eating grass – it's a very low value food, especially if you have a normal human digestive system with only one stomach. No matter how hungry you are, it probably isn't worth expending any energy collecting grass.

There are plenty of wild plants that *are* useful food sources, though, and some of them are very common. Dandelions, for example. To gardeners these are a prolific and notorious weed; hard to get rid of, and growing almost everywhere in huge numbers unless you put a lot of work into eradicating them. But to the resourceful forager they're a valuable food source, and almost every part of the plant can be eaten.

In spring, young dandelion leaves can be used as a salad green; as summer approaches they start to become bitter, but you can boil that taste out of them. The flowers can be dipped in batter and fried – they're great with either salt or syrup. Late in the year, and through winter, look for dead dandelion plants and dig up the roots below. These can be boiled and eaten as a vegetable.

Chickweed is another common garden pest that grows all across North America. It grows in patches, and these can be easily trimmed with scissors – the roots will regrow, so you can come back later for another crop. Flowers, stems and leaves can all be eaten as a salad, or boiled for two minutes and served hot.

One of the most versatile plants of all is the cattail, and it grows virtually anywhere there's a water source. This plant is also called corn dog grass from the shape of its flower heads – they look like a sausage threaded on a stick. It doesn't taste like a corn dog, but this plant has so many uses it's also called "the supermarket of the swamp".

Native Americans used cattails for many things. The fibrous stems can be used to make cords; fluff from inside the flower heads is excellent tinder and can also be used to insulate clothes or stuff pillows. The pollen helps stop bleeding; mashed roots are a great

poultice for blisters and infected cuts, and the smoke from burning heads repels insects.

Cattails are also a really good food source all year round. In spring the young shots can be eaten raw, boiled or steamed; they're tasty, rich in vitamins and minerals, and a great source of protein and unsaturated fat. In late spring use the leaves as a salad vegetable.

When summer arrives collect the pollen by putting a bag over the head and giving it a shake. Unlike most plants, cattail pollen can be foraged in large quantities and it's very useful. It can be sprinkled on many foods, used to bulk out flour, or mixed into soups and stews as a thickener.

In fall and winter, dig up cattail beds and collect the roots. These are starchy and nutritious; they contain ten times as much starch as potatoes and can be boiled, steamed or fried. Clean the roots and crush them to separate the starchy flesh from the tough fibers, or boil them and strain out the fibers as the starch breaks down, leaving you with a thick carbohydrate-rich liquid. You can also dry them and pound or grind them into a flour substitute. An acre of cattails will produce over three tons of flour.

Because cattails grow in dense beds it's easy to collect large amounts of food from them. If you have a river or marshy area nearby get down there with a knife, shovel and collecting bucket, and start foraging!

Chapter 2.

Bake your own bread

Bread is a staple food – but it's not a cheap one. Generic white bread will cost you at least a dollar for a 20oz loaf, and what you get for that dollar is not, to put it mildly, great bread. If you want anything better than basic sliced white you're quickly into the region of three or four dollars for a loaf. Bread is expensive.

But it doesn't have to be. A 20oz loaf has under a pound of flour in it – and all-purpose flour costs less than $3.50 for a ten-pound bag. Most of the rest, by weight, is water. So the basic ingredients for bread are actually pretty cheap, and if you know how to bake your own you can save a significant percentage of your weekly grocery bill. Flour can be stored for a lot longer than bread, too, so you can save even more money by buying it in bulk.

Just two or three generations ago many people most people made their own bread, but most of us have lost the habit. Making bread doesn't take that much time, and in any case, in a financial crisis time is easier to spare than money. Once you master home baking you'll be able to have fresh bread every day for a fraction of the supermarket price – and home-baked bread is a lot tastier than a cheap processed loaf, too.

There are plenty ways to make bread, and the biggest differences between them are how the bread is made to rise. There are plenty ways to do that too; for example, you can add eggs to the dough. The most common way, however, is to use yeast or another active substance that releases gas and aerates the dough. Baker's yeast is easy to find and not very expensive, but it has a limited life – and, in a real crisis, you might not be able to guarantee a supply of it. Luckily there's an alternative.

Yeast has been vital to humans for thousands of years – you can't make beer without it, for example – but we've only really known what it was since the middle of the 19th century. Commercially available yeast has only been around since the 1870s. So how did we manage to make bread – and beer – before we understood what the key ingredient was?

There's a simple answer – we did it by accident. Now, bakers and brewers use carefully selected strains of yeast, but there are also

wild yeast and most of them will work fine for either baking or brewing. Wild yeast can be found on the skins of fruit, they live in the soil and they're carried around by insects. They also drift around in the air, so if you leave any food exposed to the air for a while, soon enough yeast are going to land on it.

If you look at the German *Reinheitsgebot* – the famous Beer Purity Law – you'll notice something odd. It says that the only three ingredients you're allowed to put in beer are barley, hops and water. It doesn't mention yeast, but without yeast to ferment it, it's impossible to make beer. The *Reinheitsgebot* was written in 1516 though, and nobody had heard of yeast. So they just mixed water, barley and hops, and left it to ferment. And it did – because wild yeast landed in the huge open tubs, grew, reproduced, and fermented the beer.

For most of history, the most common way to make bread used a smaller-scale version of this. Bakers noticed that if they left a mix of flour and water exposed to the air for a while it started to form bubbles. If the bubbling mix was added to dough, the bread would rise perfectly; without the mix it stayed flat.

That bubbling blend of flour and water is a sourdough starter. It collects wild yeast from the air and starts the fermentation process, and if you mix it into dough it releases bubbles of carbon dioxide that raise and lighten the bread. Sourdough bread keeps better than commercial processed stuff, it tastes better, and it's easy to make. Best of all, as long as you have flour and water you can make a sourdough starter, so you'll never have to rely on being able to buy yeast again.

Making a starter

To get your starter going you only need four things:

- A glass bowl or wide-mouthed jar
- Water – filter it, or use water from a well or spring. The chemicals in tap water can kill wild yeast
- Flour
- Cheesecloth

Pour half a cup of water into the bowl and gradually add half a cup of flour, stirring constantly. Mix it well until it feels like thick pancake batter. Now cover the bowl with cheesecloth. This will keep dust and insects out, but the tiny yeast organisms will be able to get through.

Leave the bowl on a counter or on top of the fridge for up to 24 hours, to make sure it picks up wild yeast. Somewhere with a constant temperature of about 70-75°F is best. Then feed it by mixing in another half cup each of water and flour. By this time you'll probably see a few bubbles starting to form. Keep feeding it daily for the next few days. When it's foaming and looking lively, it's ready to use. You'll also be able to pick up a sour, vinegary smell.

Your starter will need to be constantly fed, or the yeast will eat all the carbohydrates in the flour and eventually starve to death. This is one of the great things about sourdough – the starter constantly grows itself, so once you have it going you'll never run out. If it starts to outgrow its container you can just split it in half and either throw half away or gift it to someone, so they can start making their own delicious bread.

Once the starter is ready to use, making bread is easy. Here's a simple recipe using basic ingredients:

- 3 cups all-purpose flour
- 1 tablespoon sugar or molasses
- 1 teaspoon salt
- 1/2 cup warm water
- 1 ¼ cups sourdough starter

Mix all the ingredients thoroughly and knead into a stiff dough, After eight to ten minutes of kneading, put it in a greased bread tin or shape it on a baking sheet. Cover it with a damp towel, put a dry towel over that, then leave it to rise until it's doubled in volume. This takes longer with sourdough – twelve hours, at least, and sometimes up to a full day. To check if it's ready, gently press the dough; if it dents, it's ready to bake. Now just put it in an oven at

350°F and bake for about 40 minutes, or until the top is golden brown. And there you are – tasty, and very cheap, home-made bread.

Chapter 3.

Cook efficiently

Modern cooking appliances are great – but they use a *lot* of energy. If your ancestors knew how much you spend on gas and electricity for your kitchen they'd be appalled. People a few generations ago were much more concerned with saving fuel, because they had to collect most of it themselves, and that went double during the Great Depression. Most of the fuel they did use went on cooking, so they were very good at finding efficient ways to do it. A lot of these techniques can be very valuable if you're trying to save money during the next financial crisis.

One way you can save on energy bills is to cook over an open fire. If you don't already have a wood stove to provide heat in the winter, but there's timber on your property or nearby that can be cut for wood, you're missing out on a great renewable fuel supply. Make use of it by setting up an outdoor fireplace and using it for cooking. This isn't just a good way to save money on gas and electricity; it's also the core of your survival kitchen if there's a major collapse and the utilities stop working.

You can do a lot with a well-designed fireplace; we're not talking wieners and s'mores here. Easy options are to set up a grill on it, and a spit for cooking meat – this is the most satisfying way to cook game you harvest. A heavy steel box at the edge of the fireplace will let you bake, and of course you can set up pot stands as well. Get a good bed of hardwood embers and you can cook practically anything on a fire.

For open fire cooking, look for old cast iron cookware at yard sales or on ebay. Iron pots and skillets are most effective at using the heat from a fire, and they also last forever if you care for them properly. In particular, look for the biggest iron Dutch oven you can find. Once you get it clean it up, season it properly, and get ready to be amazed at what you can do with it.

A proper Dutch oven has feet cast on the bottom and a deep rim round the lid. That's so you can stand it in a bed of embers, spread more embers over the lid, and let the food inside soak up heat from all directions. They're great for cooking soup, stew, spaghetti sauce or chilli. You can make fantastic cornbread in one, or line the base

with pastry and make a pie. You can even bake regular bread, too. It's a combination pot and oven, and ideal for using over an open fire.

Dutch ovens are also ideal for slow-cooking economically. You can do that on quite a small fire, too. Just build a fire a bit bigger than the diameter of the oven, let it burn down, place the oven in the embers, then steadily feed it just enough wood to keep it alive. You can keep a fire going for hours that way without using too much wood. The benefit of slow cooking is that you can turn tougher – and cheaper – cuts of meat tender, which is also going to save you money. The same goes for dehydrated meat and vegetables; cook them slowly and you'll get great results. A Dutch oven sitting in the fire will also get on with cooking stews while you do other things. Just throw whatever meat and vegetables you have handy into the oven. Add water and seasonings, and let it simmer slowly most of the day. By dinner time you'll have a delicious, rich stew.

Chapter 4.

Charcoal, the miracle substance

Imagine a substance that can purify water so it's cleaner than what comes out of the tap, cure upset stomachs, burn hotter than wood or coal, and kick-start a metalworking industry – but doesn't cost anything more than a bit of time to make. Well, there's no need to imagine it; that substance is charcoal.

Most people think charcoal is those little briquettes that come from the gas station in a paper sack. It isn't; those are just compressed carbonized sawdust with a bit of clay or lime to bind it together. Proper charcoal is wood that's been heated for a long time, but not fed the oxygen it needs to burn. All the liquid and volatile chemicals are forced out of it, leaving a mass of nearly pure carbon. Charcoal can be used to generate intense heat – enough to smelt iron ore or work metal on a forge – and it creates a steadier heat than wood; it's ideal for baking. It can be chemically activated to become one of the most effective filter materials in existence. And you can make it in your yard.

The industrial way t make charcoal is to seal wood inside an airtight steel container called a retort, then heat it to very high temperatures for hours (sometimes days). That's great if you have the equipment and a lot of fuel, but it's not much use if you're trying to make charcoal cheaply. Instead, you want to use the traditional method.

If you pile up a lot of wood and set fire to it, you get a pile of ash. But what happens if, as soon as the fire has a good hold, you seal it in and shut off most of the air? The fire doesn't go out; it keeps burning slowly, but without a steady flow of oxygen most of the wood can't burn. Instead, it's heated intensely and the water and volatile compounds in it start to boil off. Eventually you're left with charcoal.

The traditional way to make charcoal isn't as efficient as using a retort, but it doesn't need any expensive equipment and the whole process runs on wood – it's both the raw material for your charcoal, and the fuel that converts it. What you need to do is set up a small fire (don't light it yet) then build a tightly packed stack of firewood around it, leaving a tunnel into the kindling in the center. Cover

the stack with a layer of turf, then a layer of soil, leaving a hole at the top. This kind of sealed fire is traditionally called a clamp.

Now make a torch by wrapping oily rags round one end of a stick, light it, and push it into the tunnel. When the fire has caught well, fill the tunnel with firewood and seal the end with turf and soil. Watch the smoke coming out the top hole until it turns to clear blue, showing that the wood is dry. Now seal that too.

Watch the clamp to make sure the fire doesn't break out through the soil covering. If it does, the whole thing can quickly burn to ash – it will be *very* hot inside, and if air gets in it can flare up dramatically. If smoke starts escaping, quickly seal the spot with a shovelful of soil – if smoke can get out, air can get in.

How long a clamp burns for depends on its size. Commercial burners used to make clamps as large as thirty feet wide and ten feet high, and they could burn for a week. The smallest one you can make has about ten pounds of wood and will go for four or five hours. Once you haven't seen any smoke appearing for an hour, carefully open a small gap in the covering. If there's a lot of smoke, or you hear wood starting to burn, seal it again; if not you can start taking it apart. Remove the covering, scatter the charcoal on a hard surface and damp it down slightly to make sure it doesn't catch fire. Then just let it cool, sort out any ash and chunks of unburned wood, and that's it – you have charcoal.

Once the charcoal is cool, sort out the smallest, cleanest bits – look for chunks that have no ash or unburned wood, and are pure black. Put these aside to be made into activated charcoal. Break the rest up into convenient-sized chunks, let it dry, then use it for grilling, baking or metalworking. Natural charcoal takes a bit more effort to light than the stuff you buy, but it burns more cleanly and doesn't contain any toxic chemicals.

The best charcoal can be activated. This is a chemical process that increases the surface area by covering it with tiny pits and cracks. You can do that with high pressure steam, but an easier method uses calcium chloride. This is a useful chemical for all sorts of

reasons; it's good for preserving meat and canned vegetables, for example.

To activate charcoal with it, the first thing to do is grind the charcoal roughly. Then mix equal weights of charcoal and calcium chloride and, using a coffee grinder or mortar and pestle, grind the whole lot to a fine powder. Put it in a glass bowl, then add three times as much water as the amount of calcium chloride you used and mix it well.

What happens now is that the water reacts with the calcium chloride to produce heat. Because you ground it together the charcoal has tiny particles of calcium chloride impregnated into it, and the heat causes stress that splits and cracks the surface of the charcoal. That increases its total surface area many times.

Once the mixture cools put it in a filter made of finely woven cloth and rinse it well. Then let it dry. The water you rinse it with will be black; run that through a coffee filter, because the black color is the finest (and most powerful) particles of charcoal. Dry that too, and save it for making charcoal pills – these are good for treating stomach upsets, and even poisoning.

Activated charcoal is so powerful because it's extremely good at trapping and absorbing chemicals. This makes it perfect for making water filters that will get rid of disease organisms and pollution, or gas mask filters that can eliminate most dangers – including chemical warfare agents.

Being able to make charcoal is pretty much essential if you want to rebuild society after a major collapse; without charcoal there won't be any blacksmithing, iron smelting or metal casting. But it's also a good way to save money in an economic crisis.

Home-made activated charcoal water filters cost pennies, but are as effective as expensive commercial ones; you can access limitless purified drinking water for a couple of dollars a year. Just about any water source can be made safe with these filters, so there's no need to waste money on bottled water.

If you suffer from wind or indigestion you can stop spending money on Tums. Just get a bag of empty capsules from your pharmacist (they cost practically nothing) and fill them with activated charcoal. When you swallow them the charcoal absorbs stomach acid and relieves the symptoms.

Charcoal is one of the main ingredients of black powder, so if you can also find sulfur and saltpetre you can use it to reload ammunition. Many modern firearms won't work effectively with black powder but shotguns will, and most revolvers and bolt-action rifles will work pretty well – just remember that muzzle velocity will be a bit lower, and be extra careful to clean the bore, because the residue is corrosive.

Charcoal is a simple substance that's easy to make from cheap raw materials, but it can be used to replace a lot of more expensive things you use. That makes it an effective tool to reduce the amount of money you spend, and saving money is always valuable in a financial crisis.

Chapter 5.

Preserve your own meat

The more processing meat gets, the more it costs when you pick it up in your local store – and no meat from a store is going to be cheaper than buying half a pig at the farm gate. Of course, if you raise your own pigs that's going to be even cheaper. The problem is, how fast can you eat half a pig? Unless you want to spend money keeping a big freezer running, you're going to have to start thinking about preserving the meat for long-term storage.

During the Great Depression, a freezer was an unimaginable luxury for rural Americans – but livestock still had to be slaughtered, and the meat had to last them through the winter. Luckily they had a whole assortment of tricks to preserve it for months. You can use exactly the same traditional methods to preserve meat without using electricity.

One of the simplest ways to preserve meat is to cure it with salt. Salt's a natural preservative, and it can keep meet safe to eat for a *very* long time – in the age of sail, ships would set off on voyages lasting years with a hold full of salt beef and pork. When salt meat is needed, all you have to do is soak the excess salt from it. It's perfect for making soups and stews.

Any kind of meat can be salted, even the risky ones like pork and poultry; just make sure it's as fresh as possible when you start the process. Cut the meat into pieces – small game like rabbits can be salted whole. Next, get a large container – a plastic crate works fine, as long as it's watertight. Put an inch of salt in the bottom of it. Next, put the meat into the container one piece at a time and rub each piece with the salt. Make sure you do this as thoroughly as possible. When each piece has been rubbed, stack it in the container. You should finish up with some salt left in the bottom, so add more if you need to. Don't stack the meat too deep – two or three layers is fine.

Now cover the container to keep insects out and put it somewhere cool. A root cellar is ideal, or you can do your salting in fall or winter. Around 43-46°F works well. Now let it sit for a couple of days. The salt will draw juices out of the meat, and that will collect in the container. After about two days use the juice to wash the

salt off the meat. Then wash and dry the container, and salt the meat again. This time you should salt it heavily enough that the meat's almost hidden.

Leave the meat in the salt for about two weeks, turning it twice a day, then wash it off with its own juice again. Then you need to make a curing broth. The basic ingredients of this are water and brown sugar, but to give the meat more flavour you can season the broth as heavily as you like. Add the sugar and the juice from the meat to the water, along with any seasonings, then boil it for half an hour and let it cool. Then add the meat to it. To check there's enough salt in the broth, drop in a fresh egg; it should be about half submerged. If there's less than half showing, or it sinks, stir in more salt until half the egg is above the surface.

Now leave the meat in the broth for two more weeks. After that, take it out, let it drain, then store it in a dry, well-aired place until it's needed – again, a root cellar is perfect. If necessary, make a cheesecloth cover to keep insects off. The meat should last for up to a year. To use it simply soak it in fresh water for 24 hours, changing the water three or four times, then it's ready to go.

Another classic meat preservation method uses simple lard. Lard is another substance that has lots of uses, from lamp fuel to butter substitute to raw material for soap, but one of the least known ones is as a meat preservative.

You can render your own lard from pork back fat – simply cut it into half-inch cubes and render them down in a heavy pan over a medium heat. When the pan fills up with boiling fat and the cubes start to turn crispy and golden, take it off the heat and leave it for five minutes. Then strain out the cubes – these are called lardons, and they're delicious – then filter the fat, and pour it into heated glass jars or enameled metal containers. Let it cool and solidify, and there you go – you've made lard.

Raw meat can be preserved with lard for about a month; just cut it into chunks, put it in a jar then pour hot lard over the top. Pour in

enough to cover the meat completely, plus at least another inch. If you use exactly the same technique with smoked meat or sausages it will last up to a year, if you seal the jars tightly and store them in a cool, dry place. A side benefit is that meat preserved this way is very tender, and comes with the fat you need to cook it in!

Another way to preserve meat with rendered fat is to make pemmican. This works best with red meat, like beef or deer. First, cut the meat into thin strips and dehydrate them at a temperature of under 120°F – higher temperatures will destroy many of the nutrients in the meat. When it's as dry as possible (it should weigh about a third of what it did at the start) pound or grind it thoroughly then mix it with an equal weight of rendered beef tallow. Finally, split it into portions and bag them, or press it into cupcake molds, and let it cool. You'll end up with a solid, energy-dense meat product that can be stored for months or even years.

Chapter 6.

Make your own household products

Look at your grocery bill and see how much of it goes on non-food items. You'll probably be surprised at how much you spend on personal and household cleaning products, among other things. The good news is that you can make a lot of them yourself, from cheap ingredients, and free up your cash for more important things.

One product we all buy, but that our fairly recent ancestors made themselves, is soap. Is that worth making yourself? You probably don't spend that much on soap; a bar of it doesn't cost a lot and lasts for a few weeks. Isn't making your own going to take more time and effort than it's worth?

No, it isn't. A lot of other products you buy are, basically, soap. Shampoo, shower gel, dish soap, laundry detergent, shaving cream and many household cleaners – they're all variants on soap, and they can all be *replaced* with soap. Plain soap might take a bit more effort than some specialized cleaners but it will still get the job done, and it's a lot cheaper.

Soap is easy to make; you just need fat and lye. Traditionally lard or beef tallow was used, and processed with lye made by filtering rainwater through hardwood ash. That's always an option, but you can also buy the ingredients. That has the advantage of being more consistent, and while it does cost a bit more it's still a lot cheaper than buying soap-based products.

Basic soap is very simple to make. You only need three ingredients:

- 48oz oil (olive or canola are both fine)
- 15.5oz cold water
- 6.1oz lye crystals

Getting the proportions right is important, otherwise your soap will either be caustic or won't set (caustic soap is great for tough degreasing jobs, so if you do end up with some it's not a disaster). A set of accurate electronic scales will help you out here. You'll also need glass or metal containers, a metal pot, thermometer and some basic protective gear to protect against splashes of lye.

Start by putting the water in a glass bowl or jar, then adding the lye to it – never add water to lye, as it can explode. Add lye a bit at a time and stir thoroughly, then add some more. It'll start to fume; let the gas evaporate before the next step.

Measure out your oil and heat it to around 130°F. You want it at 110°F, so by the time you've collected the lye it should have cooled down to the right temperature. Now pour the lye into the oil, stirring constantly. Keep stirring until the mix is thick enough that you can draw on its surface.

Now pour the mixture into molds. Small Tupperware boxes are ideal for this. You can line them with food wrap first, to make the soap easier to remove, but it isn't really necessary. Seal the molds and wrap them in a towel, to let them cool slowly, then leave them for a day to set. Finally, remove the blocks of soap and cut them into conveniently sized slices with a cleaver. You can leave them to dry for a couple of weeks – that isn't really necessary either, but you'll end up with firmer soap.

A big part of coping with a financial crisis is repairing things instead of replacing them. If you look at pictures from the Great Depression era you'll see the evidence of that – people wore patched clothes and repaired shoes. They fixed up their homes with scrap wood. Everything that broke or wore out was either repaired, repurposed or cannibalized for useful materials. Nothing was wasted.

The trouble is that a lot of repairs need glue, and while modern glues are great, they're also expensive. Even a simple glue stick costs a couple of dollars, and that isn't even very strong. A lot of the time it really is cheaper to replace things, once you've figured in the cost of the glue you need to fix them.

On the other hand, what if you could make glue from natural ingredients? Good news – you can. All you need is pine resin and charcoal, and both of these are free. Collect pine resin by tying a can or bucket to a pine tree then cutting V-shaped grooves in the

bark above it. The rate resin collects in the can will depend on the time of year, but you can tap as many trees as you like to speed up production. Collected resin will harden; just break it up into lumps.

While you're waiting for resin to collect in your buckets, make some charcoal and crush it to powder. This will act as a binder.

When you have enough resin, put the chunks in a tin and heat it over a fire or stove; make sure it doesn't overheat and burn. Heat it until it melts and thins out, then filter it through a fairly large mesh to get rid of any pine needles and bits of bark – do this quickly, or it will harden on the strainer. Finally, heat it up again then stir in one part charcoal to two parts resin by volume. Mix it in thoroughly, then pour the mixture into metal containers and let it cool.

This glue is versatile and surprisingly strong. To use it, just heat the container until the glue melts; then use it to stick practically anything together and just let it cool. Prepare smooth surfaces with sandpaper first, if you can – but it will still bond pretty well even on smooth glass.

Conclusion

We've had plenty of economic crashes – and the 2008 crisis was bad – but nothing in living memory compares to the Great Depression. The USA has never experienced anything like it before or since; nearly 90 years later it's still one of the most traumatic events of the past century.

But, despite the severity of the Depression, the people who had to live through it generally coped very well. They adapted, eliminated waste from their lives, and used their practical skills to supplement whatever money and resources they had. It was a tough time for them, but in general they survived – and then they went on to fight and win the worst war in history and kick-start the USA's post-war economic growth.

If we can learn to cope with hardship as well as the survivors of the Great Depression did, we'll be able to get through almost anything life can throw at us. A big part of that is having the skills to replace things we buy with things we can make ourselves. Once you can do that, you'll find yourself spending a lot less on "essentials" – and that can make all the difference between getting by and going under.