



Can It!

START CANNING AND PRESERVING TODAY

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“When I was a boy, the way that you combated the winter blues was very simple. You went down the basement. You went to the shelves that were behind the washtub and reached up there and there were all your mother’s canned vegetables, and jams, and peaches, and there was corn, there was applesauce, and apple butter. And you reached down to the end and you got a jar of stewed tomatoes. You took that up and you took off the lid and you put some of it in a pan, and you heated it up, and you put butter on it. And in those stewed tomatoes that you yourself picked and helped your mother can last August, you found in those tomatoes the courage or sunshine or whatever it was that you needed to buck yourself up and get on with winter and not complain about it, and of course, those were Ball canning jars!”

—Garrison Keillor, *Mother Father Uncle Aunt*

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Introduction

The Garrison Keillor quote on the previous page comes from a March 15, 1997, performance of *A Prairie Home Companion* performed in Muncie, Indiana. Keillor was playing to his audience with his monologue titled, “Ball Jars.” Muncie is home to the canning icon, Ball Corporation. As he is known to do in his monologues, Keillor waxes both philosophical and sentimental on the topic of food preservation. He playfully makes the statement that, in his (mythical) childhood home of Lake Wobegon, “Home canning was the basis of a whole social order.”

As humorous as his monologue is, there is truth in Keillor’s words. Home food preservation has been a fundamental human activity until

more recent generations, when developed societies migrated to industrialized farming and food preparation. Food preservation is as old as civilization. People have always endeavored to devise safe means to extend the useful life of the food that they have found, grown, caught, or killed. During the nineteenth and early twentieth century, many families enjoyed the benefits of home-grown/raised produce and meat, and they preserved them using a variety of familiar methods including canning, drying, salting, smoking, and, later, freezing. The second half of the twentieth century saw the emergence of mega-grocery stores, food warehouses, convenience foods, fast foods, industrial farming, and the wane of home food preservation. Our busy, dual-income, multitasking families embraced convenience and fast foods, while putting Grandma’s canner on a dusty shelf or, more likely, in a tag sale. Times change and so does a society’s perspective. As the twenty-first century enters its second decade, economic issues, concern for food safety and nutrition, and a heightened awareness for global environmental concerns are foremost. Many people are revisiting home food preservation for a variety of reasons—some that are consistent with earlier generations, such as economy and wholesome food, and others that are unique to contemporary needs.

But this renaissance poses a number of questions in the minds of the new would-be preservationist. *Mom and Grandma aren’t around to show me how to do this. How can I be sure that I’m doing it right? Is it hard? Could I poison my family? What’s the best method: canning, freezing, or drying? Can city-dwellers get into home food preservation?* The stream of questions is almost endless, and the good news/bad news is that the stream of answers is, too. How does the neophyte get started without a PhD-level investment in learning?

Breathe easy. As a *Wall Street Journal* headline once stated, “Yes, You Can.” Home food preservation is not only possible for the uninitiated, but it’s also *fun*! This book is intended to bring together old-school basics and today’s need for accurate, easily accessible, and succinct instructions. I’ve designed it so that you can quickly get *just* the information that you need.

Are you new to home food preservation? Concerned about safety, nutrition, and sustainability? Focus on chapters 1 and 2. You’ll gain an historical perspective, while reviewing the many benefits of home preservation and learning about food safety and spoilage issues. You’ll see that today’s home food-preservation techniques go far beyond the Mason jar. Chapter 2 helps you choose home food-preservation methods that best support your objectives in terms of nutrition, ease, and sustainability. Many folks have strong opinions about what method is best. Bottom line: what is best is whatever works for you and your family.

Equipped with information about the scope of food procurement and preservation, you can choose the chapter that gives you specifics about the method you’re most interested in. Look at chapters 3 through 6 for details on each of the various preservation methods that we cover: freezing, canning (water bath and pressure), making jellies and jams, and pickling and fermenting. This book offers a concise survey of safe preservation methods along with tasty and convenient recipes. Because sustainability is in the forefront of many people’s minds, I offer tips and options that are eco-friendly.

You will also find handy reference information in the appendix, such as conversion charts, techniques, and more. This book is a great first step into the world of home food preservation, and when you’re ready to take bigger steps, you can check out the list of resources I’ve compiled for you at the back of the book.

Enjoy the adventure of home food preservation! It’s a hobby that easily turns into a lifestyle.



Canning: A Fresh Take on a Favorite Pastime

Canning, now also known by the trendy term *fresh preserving*, is enjoying a renaissance, and rightfully so. People are rediscovering an art that has too-long been ignored. We're learning, as you'll see shortly, that canning is not nearly as complicated as its reputation might suggest. In fact, it's possible to water-bath can 7 quarts of peaches in not much more time than you would spend making a peach pie. We covered many of the benefits of home canning in the first chapters, but here are a few highlights:

- ❖ **Sustainability.** Jars and bands are often a one-time investment and can be reused year after year, as long as they remain in good condition (no chips).
- ❖ **Economy.** The energy involved to can and keep food is low. Once canned and sealed, jars do not need to be frozen or refrigerated.
- ❖ **Ease of storage.** Unlike frozen foods, you can store canned goods almost anywhere, so your storage space is limitless.
- ❖ **Convenience.** There is no need to thaw food; it's always ready to use—just pry open the lid, cook, and serve.
- ❖ **Nutrition.** Because fruits and vegetables lose their nutrients rapidly after being picked, a jar of canned fruits or vegetables is likely to be higher in nutrients than "fresh" fruit that has been stored or transported for several weeks to your local grocery store.



WHAT CAN YOU CAN?

While the list of foods suitable for canning isn't quite as extensive as the one for freezing, it pretty much excludes only baked goods and dairy. The most popular home-canned products are fruits, tomatoes and tomato sauces, jams and jellies, salsas and savory spreads, and pickles and relishes, which are all high-acid foods and can be canned using boiling water (water-bath canning). But don't overlook the convenience of canning vegetables, meats, soups, and stews, which are all low-acid and thus require the higher temperatures of pressure canning.

HIGH- AND LOW-ACID CANNING

Back in chapter 2, when we were looking at all the things that can go wrong (but won't, because you're reading this book), we talked about a fundamental principle in canning—the treatment of high-acid versus low-acid foods. If you skipped that chapter, it's worth taking a minute to look at “How Acid and Heat Work Together in Food Preservation” on page 25. To summarize briefly:

❖ **High-acid foods** (most fruits, pickled products, jams, jellies, salsas, and tomatoes) have a built-in defense (acid) against many microorganisms and can be safely preserved by a process called water-bath canning.

❖ **Low-acid foods** (most vegetables, some tomatoes, meats, fish, and poultry) do not have sufficient acid to keep harmful microorganisms at bay and—be sure to write this down or tattoo it onto your hand—they must be preserved using a process called *pressure canning*.

Both types of canning involve similar basic steps, which we'll discuss in depth in a moment. But for now, suffice it to say that you put the prepared food into jars, close with lids and bands, and put the jars in either a big kettle with boiling water (water-bath canning) or in a specially designed sealed pot that creates pressurized steam (pressure canning). In both cases, you cook the jars and their contents for the time specified in the recipe. This cooking accomplishes two important things: it kills the microorganisms that could cause spoilage, and it creates an airtight seal that prevents new microorganisms from entering the jar.

I'll give you more information about these two different types of canning, how to choose the right method for your needs, and what equipment you'll need, plus step-by-step instructions and some help if things don't go according to plan.



Canned tomatoes are easy to process and are a real “utility player” in the kitchen. Use them for pasta sauce, meat loaf, soups, stews, and more.

GETTING READY

This may sound familiar because it's true of all types of food preservation: planning ahead will help make your canning experience fun and gratifying and your canned foods tasty, nutritious, and safe. Especially when you're first getting started, you'll want to allow yourself enough time so that you don't need to rush. Unlike the recipes for freezing foods, which are based on taste preferences and maintaining the highest-quality texture and flavor, the recipes for canning food have been carefully tested by food-safety experts, such as those at the United States Department of Agriculture (USDA), to ensure that the food is safe to eat when you open the jar. This book gives you all the instructions that you'll need for basic recipes and should serve your canning needs for many seasons. When you outgrow this book, there are lots of other really good guides that have safe and delicious recipes (see Resources).

PLAYING IT SAFE

Home canning is perfectly safe, as long as you:

- ❖ Use only top-quality, blemish-free food
- ❖ Follow instructions exactly
- ❖ Use only up-to-date equipment
- ❖ Do not use any recipes created before 1988. If you have heirloom recipes from Grandma, take them to your local agricultural extension service and ask them to review and adjust them.

Any convenience added by cutting corners is not worth the risk of food spoilage, or worse, food poisoning, or much worse, food poisoning from botulism. While it is very rare, *Clostridium botulinum*, the deadly bacterium that causes botulism, thrives in under-processed, low-acid, canned goods. This nasty bug is very potent and very deadly. Better safe than sorry!



In the appendix are charts to help you with the planning, including helping you approximate how much produce to buy or pick at one time. In my experience, it's really hard to look at a bushel of apples and imagine that you could ever use that many. But when you realize that bushel will later manifest as about 14 quarts of applesauce—a little over one quart a month—it doesn't seem like so much.

If you want the perfect peach preserves, you'll have to begin with the perfect peaches.

Here are a few questions to ask yourself as you get ready:

- ❖ What do you want to can?
- ❖ Where will you get it?
- ❖ When will you can it?
- ❖ How will you can it? See the sidebar “Water-Bath Versus Pressure Canning” for help deciding.
- ❖ Do you have the equipment that you need? (The next section goes into details about the supplies that you’ll need for canning. It’s really pretty inexpensive.)
- ❖ Do you have a tested recipe, and do you understand it? If you’re using the recipes in this book, you’ll know that they are all tested and safe, and (I hope) easy to follow. If you’re not using the provided recipes, and you have any concern about whether a recipe of your own is tested and safe, contact your local Cooperative Extension Service.
- ❖ Do you have all of the ingredients needed? If the recipe calls for water or salt, use soft or distilled water and canning/pickling salt. The minerals in hard water and the additives in some table salt can cause the liquid in your canned product to become cloudy—this isn’t harmful, but it is a bit unappetizing.



Your small investment in equipment will quickly be returned as you enjoy your bounty of tasty canned goods.

EQUIPMENT

If you are new to canning, you can get up and running with a fairly minimal investment. The equipment falls into the following categories: canners; utensils; jars, lids, and bands; and normal kitchen supplies.

CANNERS

As we’ve mentioned before, there are two basic types of canners: water-bath canners for high-acid foods, and pressure canners for low-acid foods.

Both work like your other kitchen

stockpots, heating the water on your stovetop. They are very large covered kettles (we’ll use the words *kettle* and *pot* interchangeably), with oversized, flat bottoms. Before you invest in a large canner, make sure that your stovetop can accommodate it. The canner you choose should be no more than 4 inches in diameter larger than the diameter of your burner (with an overhang of 2 inches on either side). Traditional electric coil stovetops require flat-bottomed pots, while gas

burners can accommodate either flat-bottomed or ridged pots. Some of the new cook surfaces, such as convection or ceramic, may not be suitable for such large pots. Be sure to check your stovetop manufacturer’s recommendations to be sure that your canner is compatible with your stovetop.

Water-Bath Versus Pressure Canning

Here’s how water-bath canning differs from pressure canning:

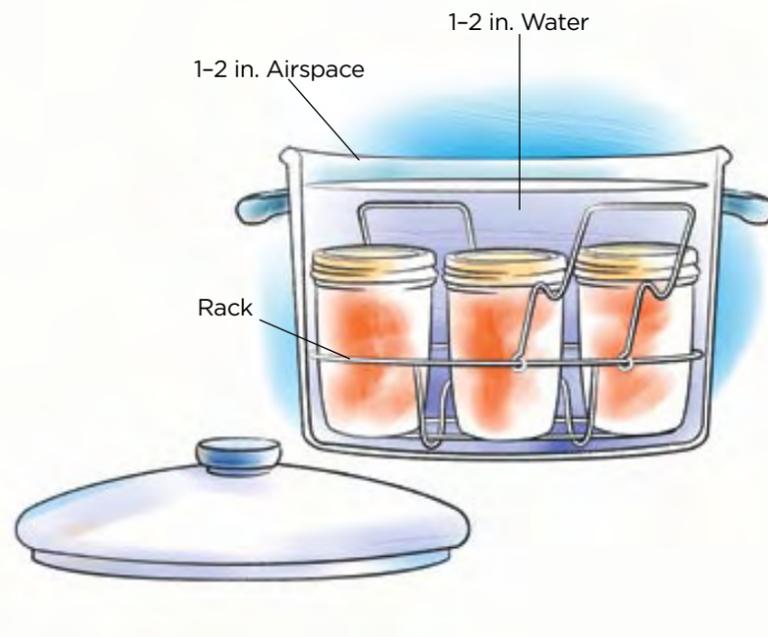
- ❖ **Water-bath canning** involves processing jars in *boiling water*, which at sea level, reaches a temperature of *212 degrees Fahrenheit*, sufficient to kill all molds and yeasts, as well as *some bacteria*. You use a large covered pot (canner) that has a rack to keep the jars off the bottom of the pot and away from each other.
- ❖ **Pressure canning** involves processing jars in *pressurized steam*, which at sea level, reaches a temperature of *240 degrees Fahrenheit*, sufficient to kill all molds and yeasts, *and all bacteria and bacterial spores*. You use a specially designed pressure canner, which is capable of forming a tight seal and thus raising the pressure of the steam within.

The chart below tells you when you should use water-bath canning and when you should use pressure canning.

FOOD	WATER-BATH CANNING	PRESSURE CANNING	COMMENTS
Fruits	YES	YES	Water-bath canning is the logical choice, but pressure canning can be used for some fruits. (See the appendix.) Figs are borderline in acidity. For them, use only recipes that add acid to lower the pH.
Jams, jellies, salsas	YES	NO	See chapter 5, but generally jams, jellies, and salsas are high-acid and easily processed by water-bath canning.
Meat products, stews, soups, and so on	NO	YES	You must use pressure canning, as well as tested and approved recipes, when canning anything with meat.
Tomatoes	YES, see comments	YES	Some new hybrids, as well as overly ripe tomatoes, can be marginal in their acidity. Most water-bath canning recipes will call for adding acid (usually bottled lemon or citric acid).
Tomato sauce, tomato juice, stewed tomatoes, or other combinations of tomatoes with low-acid vegetables	YES, see comments	YES	Follow recipes carefully to ensure that you maintain the proportions and therefore the acid level. For example, if you increase the amount of onion, pepper, or garlic, the overall acidity may fall and the pH level may rise above 4.6—the measurement for low-acid foods.
Vegetables	NO	YES	When you think of vegetables, such as corn, beans, or peas, <i>you must think pressure canning!</i> That is the only safe option. Use only tested and approved recipes.

WATER-BATH CANNERS

There are a number of sizes and styles of water-bath canners to choose from. The low-end model, which is what I have been using for the past thirty-five years and still functions well, is a twenty-one quart enamel-coated steel canner with a wire rack that holds either 7 pint jars or 7 quart jars. The high-end model is basically the same pot, but it's made of stainless steel. You can get larger sizes that will hold more jars, but the concept is



Standard canners are tall enough so that you can cover the jars with 2 inches of water and still have 2 inches of headspace above the boiling water.

the same for all of them. Also on the market, though you may need to dig around a bit for it, is an electric canner. This is a self-heating unit that you plug in. Electric canners are much more expensive (hundreds of dollars versus tens of dollars), but one might be necessary depending upon the type of stovetop you have. Regardless of the size or type, your water-bath canner should have the following features:

- ❖ A lid to cover the pot. This keeps the heat inside so that the water stays at boiling temperatures during processing.
- ❖ A metal rack that keeps the jars off the bottom of the canner and helps keep them upright and separated during processing.
- ❖ Sides tall enough so that, when sitting on the rack, the jars can be covered with at least 1 to 2 inches of boiling water and an additional 1 to 2 inches of airspace (to keep the water from boiling over).

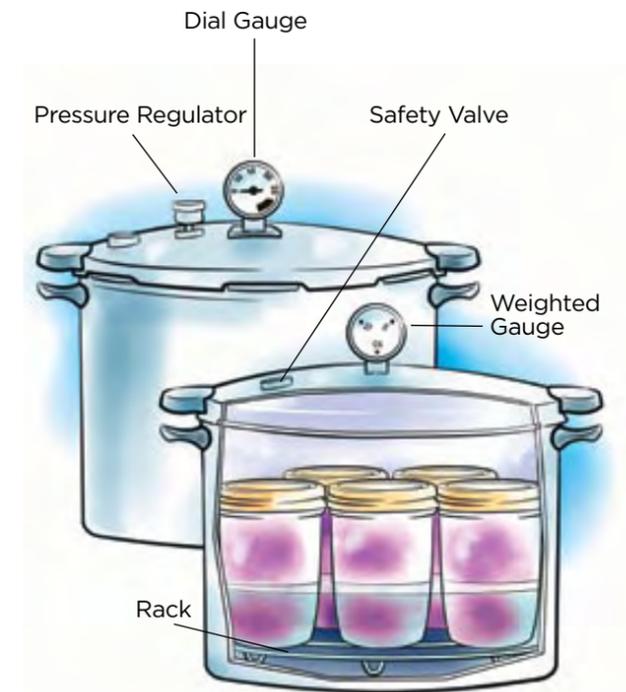
We're not talking about a big outlay of money here. As of this writing, there are a number of canners readily available for thirty to fifty dollars. There are also starter kits, which include the canner and special equipment that we'll mention shortly, for just a few dollars more than the cost of the canner. You will easily recoup your investment during your first season, and you'll have a canner that will serve you for many years.

PRESSURE CANNERS

Pressure canners (similar to pressure cookers, but larger and designed specifically for canning) are a bit more complex and require a bit more of a financial investment, but they are definitely something that you'll want to investigate once you get comfortable with water-bath canning. While a water-bath canner has a loose-fitting lid that keeps the heat in and helps maintain the boiling water temperature, pressure canners have tight-fitting lids with special vents and valves that allow carefully controlled pressure to build within the pot and then safely escape when the processing is over. The higher the pressure, the hotter the steam. The home pressure canners that we'll be working with use pressures in the range of 5, 10, and 15 pounds per square inch (psi) and can heat the steam to 240 degrees Fahrenheit. Each canner comes with its own specific directions for use. Read and follow those directions carefully. We'll discuss general procedures, but your manufacturer is the final authority.

There are two types of pressure canners, and they share many of the same features, including a lid that attaches securely to the base and possibly a gasket or a cover lock. On the lid, there is an open vent to let air and steam exhaust, a weight to close or restrict the vent and thus raise the steam pressure inside, and a safety valve or plug that will open if the inside pressure gets unsafe. There is a rack to keep the jars off the bottom of the pot and allow the steam to circulate around the jars. The pot must be deep enough to accommodate the desired jars without interfering with the lid closure. The main difference between pressure canners is the kind of gauge each uses to tell what the pressure is.

- ❖ **Dial-gauge pressure canners** have a dial with an arrow (like a clock face) that shows you exactly what the pressure is. These canners will have an opening for an air vent and a weight (called a *petcock*) that sits on the vent to maintain the pressure.



Pressure canners come in two basic styles: dial gauge and weighted gauge. If using an older model, be sure that all parts are in good working condition.