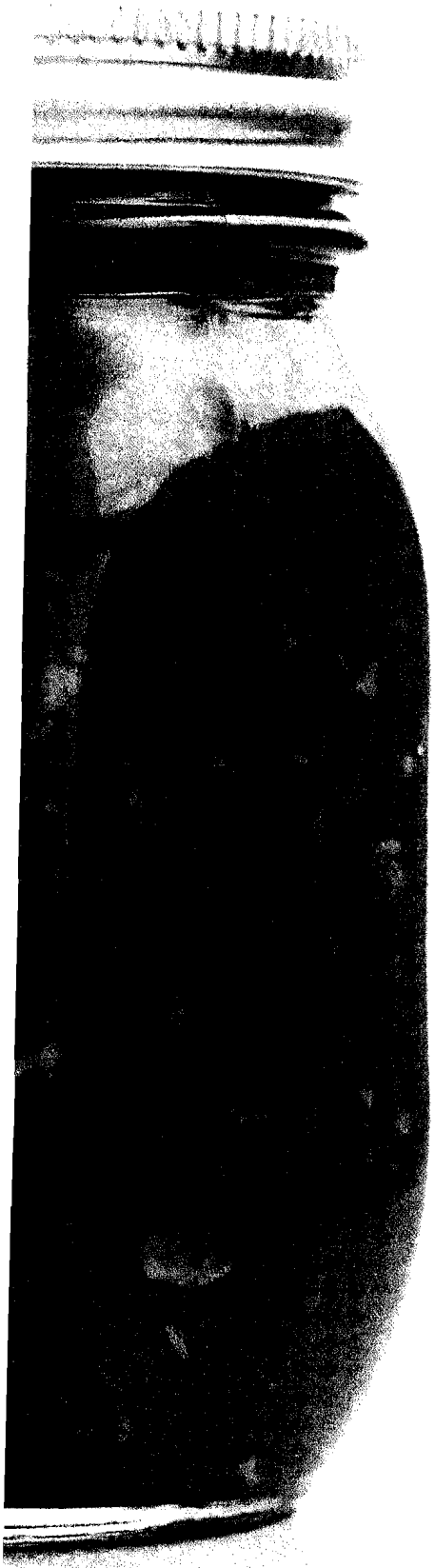
Better Homes and Gardens®

YOU CAN CAN

A GUIDE TO CANNING, PRESERVING, AND PICKLING



HOW DOES CANNING WORK?

Understanding the fundamentals of canning will set you on your way. Learn a few basics and you're sure to have a safe—and delicious—experience.

Decades ago people canned because they had to. "Putting up" food in crocks and jars was one of the most reliable ways to preserve the bounty of the summer garden.

Today people can because they choose to. They have more control over how the foods are grown and processed—and few things are more satisfying than stepping back from a canning session to admire gleaming jars filled with gorgeous produce.

Over the years the basic process of canning remains the same, however: Heat food to a specified temperature for a particular period of time to destroy harmful microorganisms and inactivate enzymes. The process also vacuum-seals jars to remove air and prevent other micro-organisms from invading.

Microorganisms include molds, yeasts, and bacteria. They are naturally occurring and sometimes even beneficial, such as those found in yogurt. But others are harmful and must be destroyed with heat.

Enzymes are also naturally occurring. They are helpful in nature, but in canning, enzymes can affect the color, texture, and flavor of foods. Heating inactivates these enzymes.

The vacuum seal is a result of heat penetrating the jar in the canner. As food and air in the jar expand with heat, pressure builds in the jar.

After the jars are removed from the canner to cool on the counter, the air cools and contracts, creating a vacuum in the jar, pulling the lid downward into a concave shape. (The metal lids make a popping sound as this happens.) The sticky compound around the rim of the lid, softened by the heat, cools and seals the jar.

The result? A shelf-stable product that can be stored in a pantry or cupboard to enjoy for up to a year.

THE MORE THE MERRIER

Canning can be done solo, but some of the most satisfying canning projects are done with friends and family. Get together a group and speed through the job while sharing a few hours of fun.

Invite them all to bring their own stash of produce. Or make a day of harvesting produce at a pick-your-own farm. At home, turn the harvest into delicious jams, sauces, and more.

THE FIVE RULES OF CANNING

Follow these basic rules to ensure success.

❶ KNOW WHICH CANNER TO USE
The boiling-water canner—basically a big pot with a lid and a rack in the bottom—is used for high-acid foods, which naturally resist bacteria growth. Pressure canners are used with low-acid foods and recipes that are especially prone to harboring harmful microorganisms. They heat food hotter than boiling-water canners.

The recipe will specify which type of canner is appropriate. In this book, nearly all the recipes can be made in a boiling-water canner. (See pages 19 and 22 for more information.)

❷ CHOOSE THE RIGHT JARS Use jars made specifically for canning. Don't use glass jars from purchased food, even if they look like canning jars. Don't use jars that look different from the canning jars currently on the market. And avoid jars with chipped edges, as that can affect the seal.

Use the size jar specified in the recipe because it takes longer to achieve the critical internal temperature in larger jars. (See page 20 for more information.)

❸ USE LIDS PROPERLY Use the special two-piece lids manufactured for canning. Reuse the rings, but do not reuse the lids, which have a special sticky compound that seals the jar.

Don't screw lids on too tightly or they won't create a vacuum seal properly. Heat the lids in very hot but not boiling water or the compound won't seal. Test for sealing on each jar after it has cooled. Press the center of the lid. If the button is depressed and does not make a popping sound, it has sealed properly. (See page 37 for more information.)

❹ CHOOSE THE RIGHT RECIPE Modern canning recipes are safer than those from just 20 years ago. Jellies, for example, are no longer sealed with wax but in vacuum-sealed jars. Foods may be processed longer or hotter. Always use tested recipes from reliable, current sources—and follow the recipes exactly. Don't alter ingredients. Alterations can change the acidity and compromise food safety. (See page 16 for more information.)

❺ KEEP IT CLEAN AND KEEP IT HOT Keep everything scrupulously clean. Wash and sterilize jars. Pack hot food into hot jars one at a time—not assembly-line style. (See page 35 for more information.)

HIGH-ACID AND LOW-ACID FOODS

In canning, the acidity level of foods is critical. High-acid foods are naturally less likely to harbor harmful microorganisms, while low-acid foods require either more acid or more heat for safe canning.

Foods for canning are basically divided into two groups: low-acid and high-acid.

HIGH-ACID FOODS These are the simplest to process. Their high acidity levels create a difficult environment for microorganisms and enzymes to thrive, so processing them in the lower heat of a boiling-water canner is safe.

High-acid foods have a pH of 4.6 or lower. Nearly all fruits, jams, and jellies are low-acid foods. Lemon juice, lime juice, and vinegar are very acidic. For that reason, most pickles and most salsas are high-acid, even though they may contain foods that are otherwise low-acid, such as green beans and carrots.

LOW-ACID FOODS These foods have a pH greater than 4.6. Most vegetables are low-acid, as are most soups, stews, and meat sauces. Unless large amounts of an acidic food (such as vinegar) are added, these low-acid foods must be processed in the higher heat of a pressure canner.

Tomatoes are close to neutral acidity. Depending on the recipe, they are canned in a boiling-water canner or a pressure-canner.

ACIDITY BOOSTERS Lemon juice and vinegar are highly acidic. They're often added to low-acid foods to control harmful bacteria that can't thrive in acidic environments.

That's why canning recipes for tomatoes, which have a fairly neutral pH, often call for adding of a teaspoon of lemon juice.

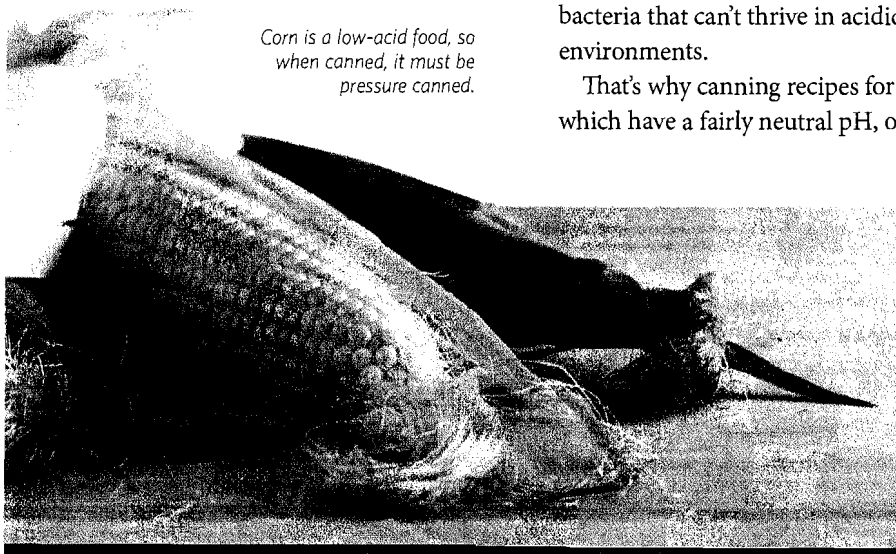
It's also why green beans in a vinegary brine can be processed in a boiling-water canner (which doesn't get as hot and doesn't kill microorganisms as effectively as a pressure canner). Plain green beans, on the other hand, must be processed in the higher heat of a pressure canner.

PROCESS IN BOILING-WATER CANNER

pH Level	Food
1.0 to 1.9	Limes
2.0 to 2.9	Lemons, strawberries
3.0 to 3.9	Gooseberries, rhubarb, pickles, oranges, peaches, sauerkraut, apples, apricots, cherries, plums, blueberries, raspberries, blackberries, pears
4.0 to 4.6	Grapes, most tomato recipes

PROCESS IN PRESSURE CANNER

pH Level	Food
4.7 to 4.9	Green beans, eggplant, some tomato recipes
5.0 to 5.9	Asparagus, carrots, pumpkin, sweet peppers, beets, turnips, sweet potatoes, cucumbers, onions, cauliflower, cabbage, okra, zucchini
6.0 to 7.0	Peas, lima beans, corn, spinach



Corn is a low-acid food, so when canned, it must be pressure canned.

METHODS OF PRESERVING FOOD

Once you have your hands on all that delicious produce, you'll find that there are several ways to preserve its goodness. Choose the right method to produce the desired results.

The way you process produce depends on the desired result. Should raspberries be made into a rich jam, frozen, or elegantly brandied? Should the tomatoes be made into a rich sauce, frozen whole, or dried?

Here's an overview of basic processing methods:

1 BOILING-WATER CANNING A boiling-water canner is simply a very large pot with a rack in the bottom and a lid on the top. Jars are submerged in simmering water for a specified time. They are heated to a temperature of 212°F. This method is used mainly for fruits, pickles, salsa, and other high-acid foods. It's also used for some tomato recipes.

2 PRESSURE CANNING A pressure canner has a lid that locks on and a dial that allows you to regulate the steam pressure building up inside by turning the burner heat up or down. The pressurized steam is much hotter than boiling water—pressure canning heats jars to 240°F. This higher heat kills tougher microorganisms that can thrive in low-acid foods, such as green beans, soups, and sauces with meat.

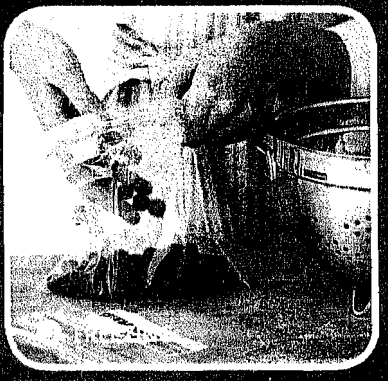
3 FREEZING An easy way to preserve garden produce, freezing preserves texture in a way canning doesn't. Check out the freezer jams (see page 186). Freezing is also easy—just put food into airtight containers or bags and stash them in the freezer!

4 BRINING Merely by marinating some foods in a vinegar-base brine you can preserve them for weeks longer than they would stay fresh otherwise. Simply make the brine, pack into scrupulously clean containers, and store in the refrigerator for the maximum recommended time.

5 PRESERVING IN ALCOHOL Alcohol, a disinfectant, kills many harmful bacteria. You can preserve fruit in nothing but alcohol, but it's more flavorful to add spices and other flavorings.

6 DRYING Food dries most reliably in a dehydrator, a small electric countertop appliance. But you can also dry foods in the oven with some success, as with dried tomatoes and apples, which intensifies flavor and alters texture.

Food dried in a dehydrator can be safely stored in plastic bags or jars on a shelf. However, food dried in an oven doesn't dehydrate as completely, so it should be stored in plastic bags in a refrigerator.



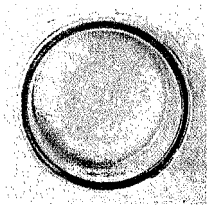
Steam canners and steam canning information can be found on the internet, but several sites I visited did not recommend this method of canning.

UNDERSTANDING JARS

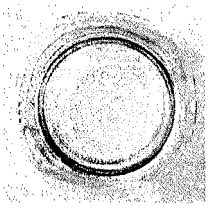
Wide-mouth or regular-mouth? Quart or pint? There are many different types of canning jars available, each with its advantages and disadvantages. Choose the right jar for the recipe.

More than ever, home canners have a wide selection of jars from which to choose for food preservation.

Larger jars come as either wide-mouth or regular-mouth. Wide-mouth jars are ideal for packing large pieces, such as whole cucumbers or peaches, into a jar. Regular-mouth jars are fine for recipes that don't have large pieces, such as soups, sauces, and juices.



WIDE-MOUTH



REGULAR-MOUTH

Recipes often specify jar size. The following jars are the most widely available for home canners:

❶ **QUART JARS** Use these large jars for any large food, such as whole tomatoes, or for a generous amount of a recipe, such as spaghetti sauce or soup for a crowd. These jars come in both wide-mouth and regular-mouth.

❷ **PINT JARS** The most versatile jar, this can hold nearly anything—smaller amounts of sauce, vegetables to serve a few people, and larger amounts of jam. These jars come in wide- and regular-mouth.

❸ **PLASTIC FREEZER JARS** Freezer jam stores well in plastic freezer containers and

❶ QUART JAR

❷ PINT JAR

❸ PLASTIC FREEZER JARS

MEASURING HEADSPACE

The amount of headspace is specified by the recipe and is important to ensure that a jar seals properly.

Measure headspace with a ruler or canning tool from the top of the jar to the top of the liquid. It's okay if a little bit of solid food rises above the liquid; it will settle into the liquid over time.

glass jars, but these plastic jars are just the right size, with no danger of cracking in the freezer.

❹ **8-OUNCE JELLY JARS** Usually with a quilted or other pattern on the side, these jars have straight sides for better freezing (no shoulders for freezing food to push up and break) and for getting every last bit of jam out of the jar.

❺ **4-OUNCE JARS** Home-canned food doesn't last as long in the refrigerator as commercial products because no artificial preservatives are added. These small jars hold amounts you'll use up more quickly.

❻ **DECORATIVE JARS** For refrigerator-pickled foods that don't require heat processing, decorative glass jars work fine. Just make sure you sterilize them in almost-boiling water before filling.

❼ **VINTAGE JARS** Old canning jars with colored glass or spring-type lids are pretty collector pieces but they shouldn't be used in modern canning. They have irregular sizes, may crack, and don't seal properly.

RAW AND HOT PACKS

Food is loaded into jars in one of two ways—the hot-pack or the raw-pack method. Here's how to determine which is better for your situation.

To achieve ideal flavor and texture, a recipe will follow either a hot-pack or raw-pack method.

Although the recipe might not refer to these names, it will instruct you to put food into a jar raw and top it with hot liquid or to cook the food first and pack it, still hot, into jars. With some foods, such as green beans or peaches, a recipe recommends both methods.

HOT PACK

For food that is firm and processes well, this method is preferred. It's the best method for most vegetables, meats, poultry, seafoods, and most fruits.

Simmer food in brine, water, juice, or syrup for a few minutes. Then load the food, still hot, into hot, sterilized jars.

Precooking the food this way breaks it down more to eliminate air so it's less likely to spoil and so food doesn't float. Also more produce can be loaded into fewer jars and processing time is less because the food is already hot—a significant advantage if you're processing large amounts of food.

RAW PACK

Also called cold pack, this method is better for foods that are more delicate and that would have a tough time standing up to a cooking process followed by the heat-intensive canning process.

Food is placed into the jar while still raw and packed in firmly but not crushed. Boiling brine, syrup, juice, or water is added if additional liquid is needed (the recipe will specify).

This method is fast and easy and helps preserve texture. However, it also may result in some shrinkage as food is processed, causing some foods to float to the top of the jar.

ADDING SYRUPS

Some canned fruit recipes call for the addition of syrup.

Generally, heavy syrups, which have more sugar, are used with sour fruits. Light syrups are ideal for sweeter fruits. Also, if you want to cut down on sugar, make a light syrup or even pack in juice or water.

To prepare a syrup, place the following amounts of sugar and water in a large saucepan. Heat until sugar is dissolved. Skim off foam, if it forms, to ensure a clearer syrup. Use syrup hot for canned fruits; chilled for frozen fruits. Allow ½ to ⅔ cup syrup for each 2 cups fruit.

VERY THIN OR VERY LIGHT SYRUP Dissolve 1 cup sugar with 4 cups water to yield 4 cups syrup.

THIN OR LIGHT SYRUP Dissolve 1⅔ cups sugar with 4 cups water to yield 4¼ cups syrup.

MEDIUM SYRUP Use 2⅔ cups sugar and 4 cups water to yield 4⅔ cups syrup.

HEAVY SYRUP Use 4 cups sugar and 4 cups water to yield 5¾ cups syrup.

With the hot-pack method, food is simmered and then ladled, still hot, into hot jars.

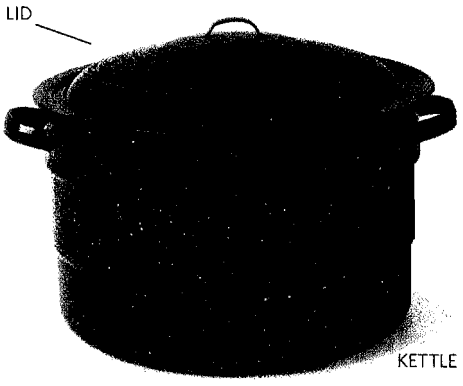
CANNING TOOLBOX: CANNERS

The largest and a key piece of equipment in canning is the canner. Here's what you need to know about the two basic types and which one to use for different types of canning.

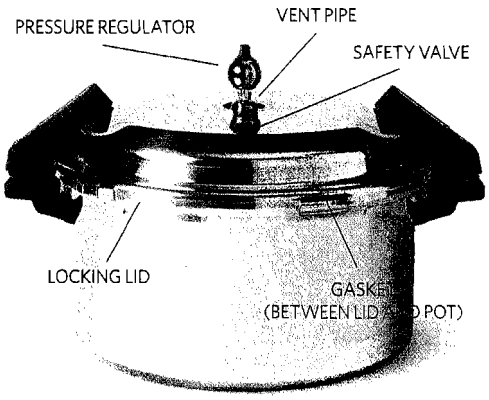
BOILING-WATER CANNER

This method is also called hot-water canning or a hot water bath. It's used for fruits, tomatoes, salsas, pickles, relishes, jams, and jellies. It's a very simple setup, nothing more than a very large pot with a rack at the bottom on which to set jars.

A boiling-water canner heats jars to 212°F, enough to kill microorganisms found in high-acid foods (see page 16). The rack allows water to flow beneath the jars for even heating. It also has handles that allow you to lower and lift jars easily into the hot water. Canners come in different sizes and finishes. A traditional speckled enamel finish resists chips and rust well. High-end boiling-water canners are available in sleek polished steel.



BOILING-WATER CANNER



PRESSURE CANNER

PRESSURE CANNER

This canner is used for most vegetables and other low-acid foods (see page 16). It's also used to process some foods that contain low-acid ingredients, such as most soups and sauces containing meat.

The pressurized steam the canner produces is hotter than boiling water, so it can heat foods to 240°F, hot enough to kill the tougher microorganisms found in low-acid foods. Unlike a boiling-water canner, put only 2 to 3 inches of water into the bottom—don't fill it—because you're creating steam, not a bath of boiling water.

Much safer than pressure canners made years ago, today's pressure canner is also simpler to use. It has a rack in the bottom and a heavy lid that twists and locks in place.

PRESSURE-CANNER REGULATORS

On the top of all pressure canners is a dial or knoblike device—the pressure regulator. It helps you control the pressure inside the canner. There are three types.

ONE-PIECE PRESSURE REGULATOR This is the most common type sold today. Add or remove weight rings from it to set the pressure canner for 5, 10, or 15 pounds. Set the regulator on top of the vent pipe to start the pressurizing process. Adjust heat to control the rattling sound it makes as the canner gains or loses pressure.

DIAL GAUGE REGULATOR More common in older models, a dial regulator shows exact pressure inside the canner. Adjust heat up and down to stay at whatever weight is specified in a recipe. A dial regulator must be inspected for accuracy annually. Your local cooperative extension service or a store that sells pressure canners can advise where to get a dial checked.

WEIGHTED REGULATOR Made of a disklike piece of metal, this must be set on the vent pipe at the correct position to process at 5, 10, or 15 pounds. Like a one-piece pressure regulator, it makes a rocking sound.

PREPARING JARS AND LIDS

Before filling, jars and lids need to be heated and sterilized in the canner or other hot water to ensure safely canned foods. The process isn't difficult, but follow these directions to do it correctly in record time.

STERILIZING JARS

All jars must be cleaned and sterilized before using.

You can simply dip them in a large pan of simmering water for a few minutes and then load them, still hot, with food.

A more efficient way is to use the canner, which already has hot water in it. After filling the canner halfway and bringing the water to just below a simmer, put the jars in it, filling each jar with some hot water to prevent floating. If the canner has an adjustable rack, position it in the highest position. Cover with the lid to get the jars hot and steamy. They don't need to be submerged; the steam will sterilize them. After a few minutes, the jars are ready to fill.

Take out just one jar at a time, fill it, put on the lid, and return it to the canner to keep everything hot. Then take out another jar and fill it: One jar out, one jar in.

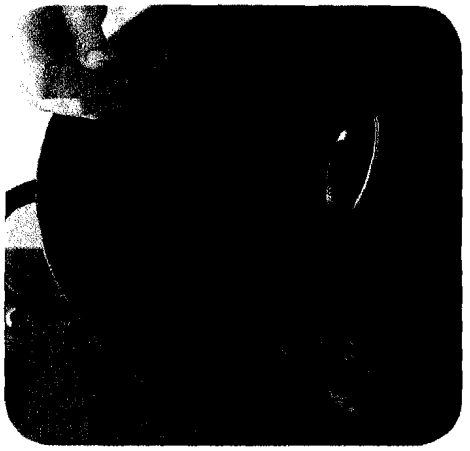
If using a pressure canner, fill the canner with 2 to 3 inches of water and, with the lid loosely (not locked) in place, bring the water to not quite a simmer. Put the jars in the canner with a little water to prevent them from floating.

Put the lid back on—loosely, not locked—and allow the jars to get steamy hot. After a few minutes they will be sterilized and ready to pack with hot food.

Again, take one jar out, fill it, and replace it in the canner before removing another jar: One jar out, one jar in.

HEATING LIDS

Before using lids, heat them to soften the sealing compound. Put the lids in the canner with the jars as you sterilize them.



Lids can be heated in hot (not boiling) water right in the canner. Lift out with a magnetic canning lid wand or tongs.

Or heat them in a saucepan by themselves, if you wish.

Regardless, the water must be very hot (180°F) to soften the compound but must *not* boil or the compound will start to break down.

Rings can be sterilized, too, but it's not necessary. Instead you can wash them in hot, soapy water and rinse thoroughly.

CHOOSING THE LIDS

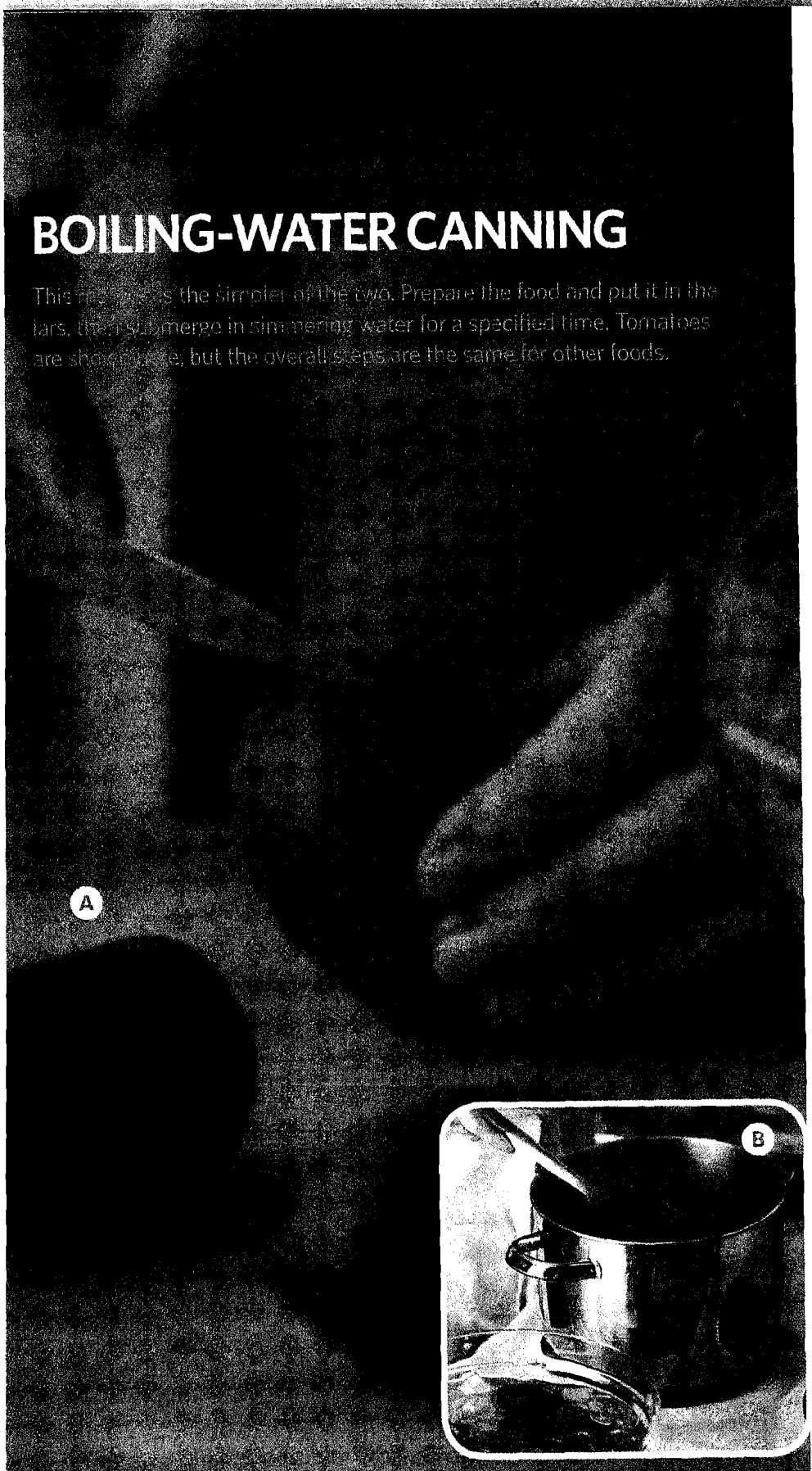
Lids are essentially flat disks of metal with a sticky compound around the edge. When heated, that compound softens, then cools, and creates a long-lasting seal.

Lids also have a raised circle in the center. After canning, if a vacuum seal has been created, that raised circle is sucked down and flattened. If the seal has not been properly created, you can press the circle with your finger and it will pop up and down. (In that case, refrigerate and eat the food within a few to several days.)

The function of bands is simply to hold the lids in place during processing and cooling. They can be reused many times unless they start to rust.

BOILING-WATER CANNING

This method is the simplest of the two. Prepare the food and put it in the jars, then submerge in simmering water for a specified time. Tomatoes are shown here, but the overall steps are the same for other foods.



STEP 1 PREPARE THE FOOD

While you're preparing the food to be canned, heat water in the canner. Fill the canner about halfway with water and position the rack. Set jars in the canner to sterilize (see page 32).

Ⓐ **SCORE THE TOMATOES** Make an X in the blossom end of each tomato with a small sharp knife.

Ⓑ **BLANCH** Heat a large kettle of water to boiling. Drop in the tomatoes to simmer for 1 or 2 minutes.

Ⓒ **COOL AND PEEL** Immediately plunge the tomatoes into icy water to loosen the skins. The skins will slip off easily. Cut out the stem ends with a small, sharp knife.

STEP 2 FILL THE JARS

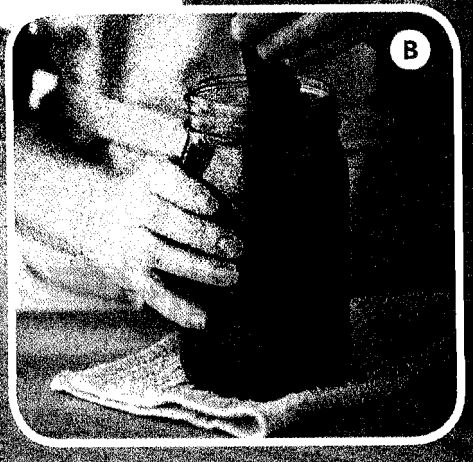
The cold-pack method for tomatoes is shown here (recipe on page 50), but follow the exact process specified in your recipe.

Ⓐ **FILL** Pack the jar as tightly as you can with the food without crushing it. Top with any hot liquid as specified in the recipe.

Ⓑ **REMOVE AIR BUBBLES** Insert a special canning tool or a thin, flexible spatula down along the sides of the jar to remove any air bubbles. Measure headspace (see page 21), adding or removing liquid as needed.

Ⓒ **WIPE** Wipe rim and threads of jar with a clean, damp cloth to remove any residue that might interfere with the seal.

Ⓓ **PUT ON LID** Set lid on jar and screw on band no more than fingertip-tight, just tight enough that you could turn the band another ¼ to ½ inch tighter. This is important for a proper seal.



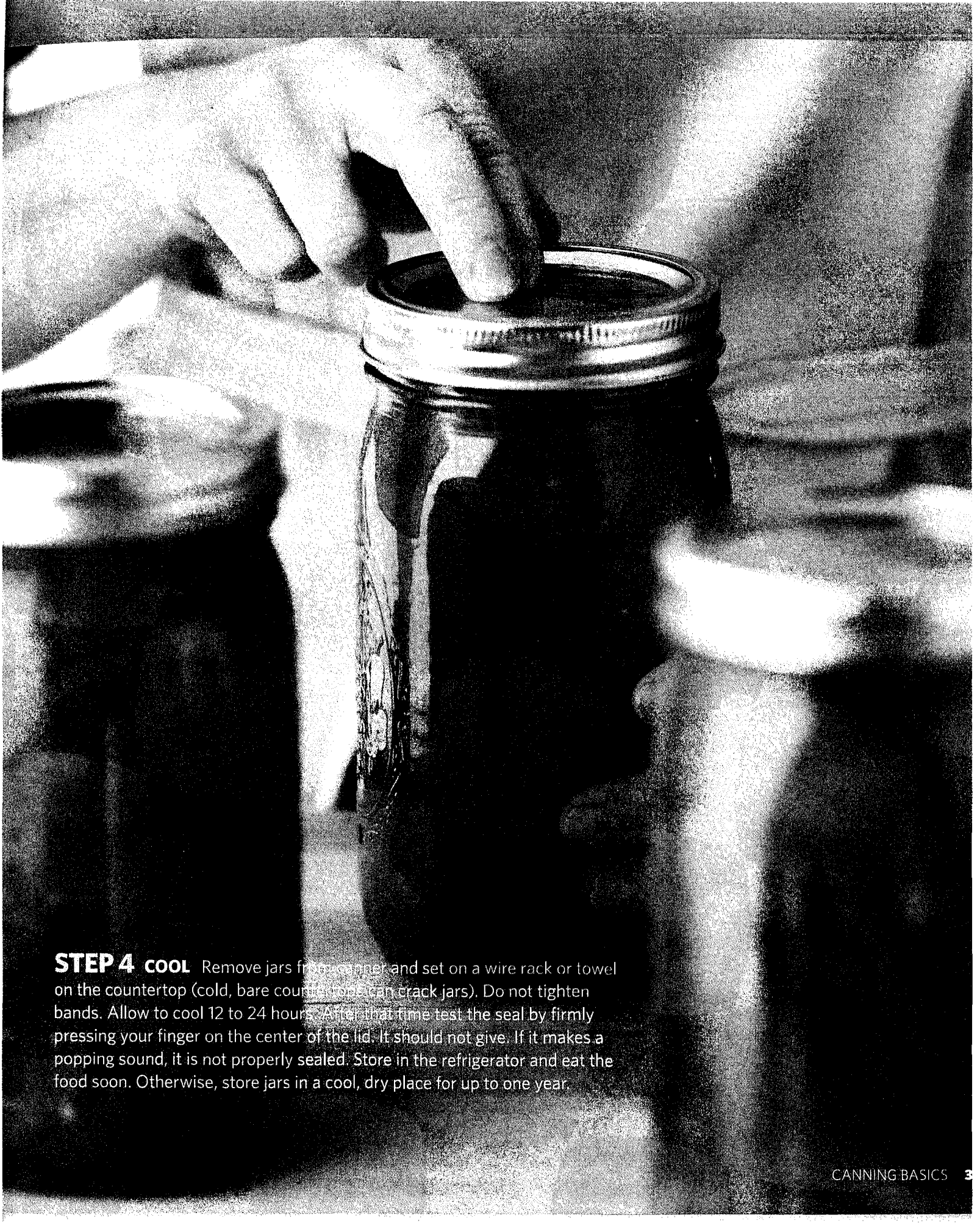
STEP 3 PROCESS THE JARS

Submerging the jars in boiling water heats and sterilizes the food inside and is the first step in creating a sealed jar.

A PLACE JARS IN CANNER As you fill each jar, set it back in the canner filled with simmering water. The canner shown has a rack with handles to hang on the canner rim so that jars sit halfway in the water.

B PROCESS JARS When all jars are filled, lower them into the canner. They should be covered with 1 to 2 inches water. Add more boiling water if needed to achieve this. Start processing time from the moment the water starts to boil. Keep at a low, rolling boil.

C REMOVE JARS When the processing time is up, turn off heat. Using pot holders, lift up the rack and rest handles on the side of the canner. Allow the jars to cool in place for a few minutes.



STEP 4 COOL Remove jars from canner and set on a wire rack or towel on the countertop (cold, bare counter tops can crack jars). Do not tighten bands. Allow to cool 12 to 24 hours. After that time test the seal by firmly pressing your finger on the center of the lid. It should not give. If it makes a popping sound, it is not properly sealed. Store in the refrigerator and eat the food soon. Otherwise, store jars in a cool, dry place for up to one year.

PRESSURE CANNIN

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A

STEP 1 PREPARE THE FOOD

While you prepare the food, heat 2 or 3 inches of water in the pressure canner with the lid set on it loosely. Set the jars in the canner to sterilize (see page 32) but do ***not*** lock the lid in place or pressure will start to build.

Ⓐ **WASH AND TRIM** Wash the beans. Then cut off and discard the woody stems. Cut off the entire "tail" end of the bean, if desired, but it's not necessary.

Ⓑ **CUT THE BEANS** Cut or snip the beans into bite-size sections. Shorter pieces will fit into the jar more easily and make them easier to eat.

STEP 2 FILL THE JARS

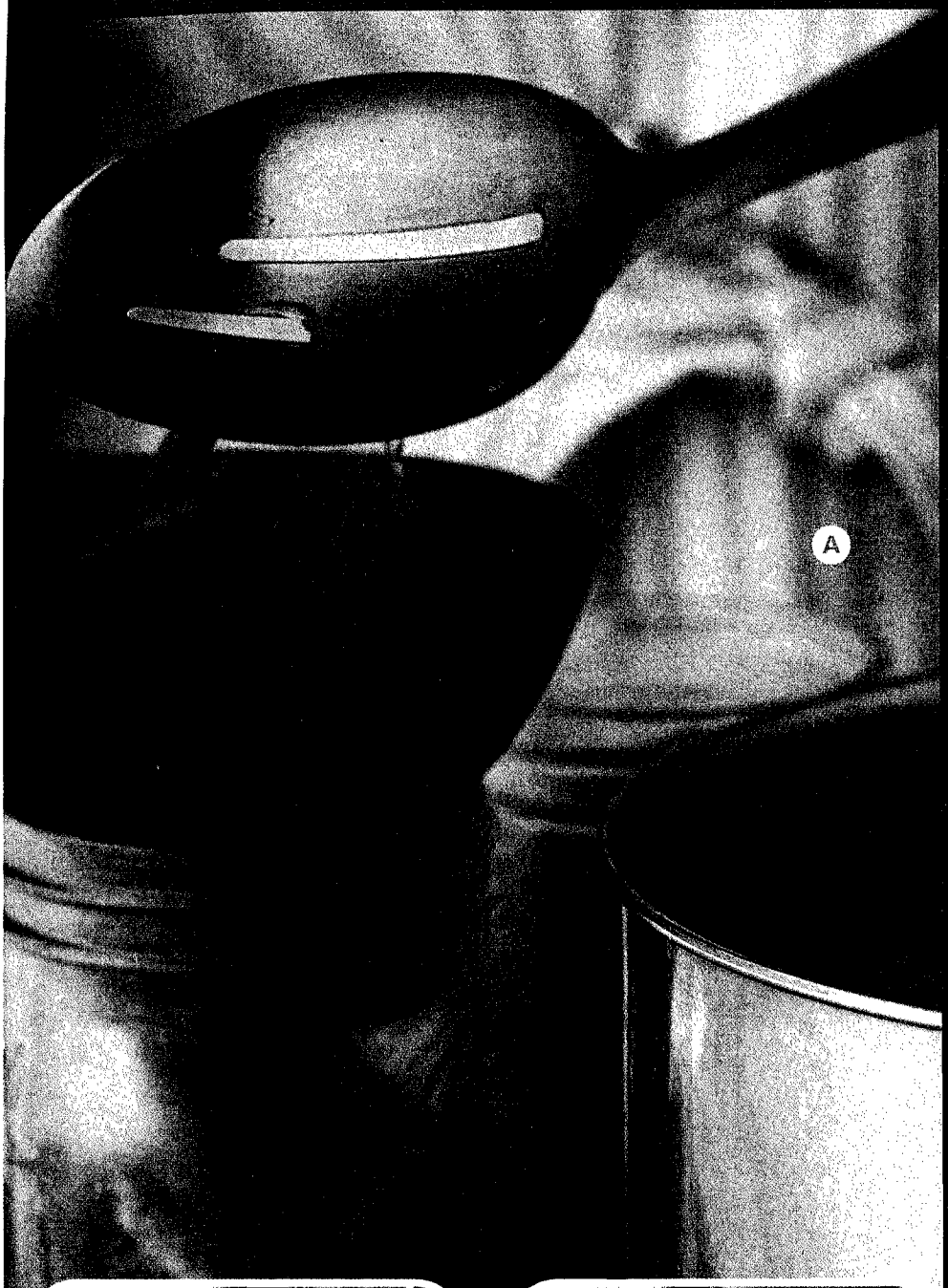
The hot-pack method for green beans is shown (see page 31), but the process is similar for other foods that are to be pressure-canned.

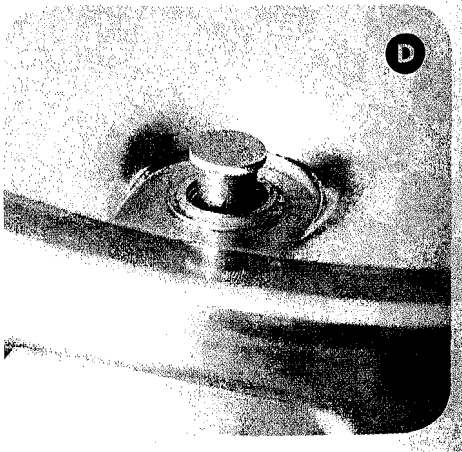
A FILL WITH PRODUCE Remove one hot jar at a time from the canner. Fill with the food, using a funnel as needed to keep jar rims clean. Pack in the produce with your fingers as tightly as you can without crushing it. Fill one hot, sterilized jar at a time; do not fill a cooled jar.

B ADD HOT LIQUID Top with boiling water, brine, or other hot liquid as specified in the recipe. Measure headspace (see page 21) as the recipe directs. Add or remove liquid as needed.

C REMOVE AIR BUBBLES Use a thin, flexible spatula or canning tool to remove air bubbles. Add more water if needed to achieve the correct headspace.

D PUT ON LID Wipe off the jar rim and threads with a clean cloth. Set lid in place and screw band on fingertip-tight, just ¼ to ½ inch from very tight. This is important so air can escape for a proper seal. Place the jar back in the canner before filling the next jar.





STEP 3 PROCESS When all the jars are filled, close the canner and allow pressure to build. Follow canner directions for your specific model.

A FILL THE CANNER Set the last jar in place. The water in the canner should come up only a few inches and not cover the jars. Only enough water to create steam is needed.

B LOCK THE LID Set the lid in place and twist so the handles lock it in place. Do not put on the pressure regulator yet.

C VENT THE CANNER Turn heat to high and allow a full head of steam to come out of the vent pipe. Allow to vent for 10 minutes. Adjust weights on the pressure regulator as specified in the recipe. Set the pressure regulator on the vent pipe to plug it.

D ACHIEVE THE CORRECT PRESSURE The safety valve will pop from the down position to the up position, showing that the canner is now pressurized. Do not open the canner. When the pressure regulator starts to rock, adjust heat so it makes a steady rattling sound. Set the timer for the time specified in the recipe.

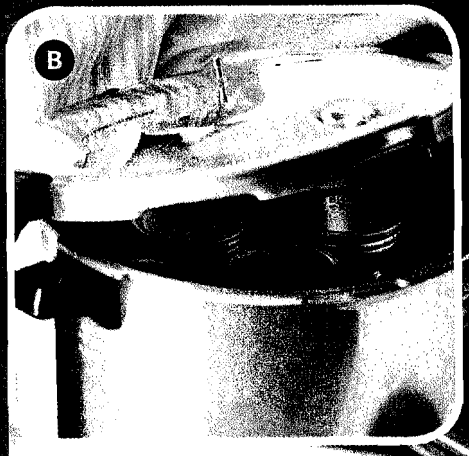
STEP 4 COOL THE JARS

Once processing is complete, allow the canner to depressurize and then cool the jars.

A DEPRESSURIZE When the timer goes off, turn off the heat. Do not open the lid. Wait until the safety valve drops back down. This shows that the canner is no longer pressurized and is safe to open.

B OPEN THE CANNER Remove the pressure regulator. (Very little or no steam should escape.) Unlock the handles and open the canner away from you so that steam is directed away from you.

C COOL THE JARS Allow the jars to stand in the canner for 10 minutes to cool slightly. Remove them from the canner and set on a wire rack or dry towel on the countertop. Do not tighten lids. Allow to cool for 12 to 24 hours. Test seals by pressing on the lid (it should not pop up or down). Refrigerate any improperly sealed food to eat soon. Store others in a cool, dry place.



Canning Safety Tips

I've heard conflicting information about the dangers of pressure canning food. How can I be sure the foods I've canned are safe to eat?

Lucy Kearse
McAllen, Texas

ISTOCKPHOTO/JAMES PAULS; BOTTOM: MATTHEW T. STALLBAUMER

Use a pressure canner to safely can low-acid foods and foods with low-acid ingredients, such as salsa. Tomatoes are borderline in acidity, but onions and peppers are low-acid.

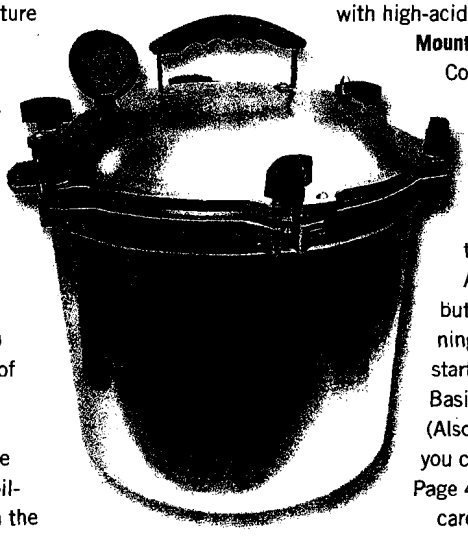
Learning to can foods can be intimidating, and it's certainly important to do it properly. After all, sometimes there are no colors, odors or other handy indicators to betray potentially hazardous canned foods that could make you sick. But canning foods safely isn't as difficult as you may have heard.

There are three main things that cause concern: equipment reliability, foodborne illness and altitude adjustments. Let's get the first one out of the way, because it's a snap.

Modern pressure canners are safe. You may have heard about pressure canners of yore exploding when pressurized. Rest assured, the canners available today are much more reliable than they used to be. According to the National Center for Home Food Preservation, home pressure canners were extensively redesigned beginning in the 1970s. Today they all have an automatic vent/cover lock, a steam vent and a safety fuse. However, it's still important to carefully follow guidelines that come with your pressure canner, both for safety and to be sure you're canning at the correct temperature and pressure. (Keep reading.)

Avoiding foodborne illness is simple. The purpose of canning is to heat the food to a high enough temperature to arrest enzymatic activity and kill yeasts, molds and bacteria. Most of these nasties are knocked out by the acidity of foods or by heat. There are a few pathogens, however—most notably the one that can cause botulism poisoning—that thrive in low-acid foods and can survive temperatures up to 240 degrees Fahrenheit. That's a potential problem because the temperature of water boiling in an open pan (or in this case, in a water bath-style canner) never reaches much above the boiling point of water—212 degrees.

Pressure canners, on the other hand, can reach higher temperatures. Here's why: These canners trap the steam that escapes from boiling water, thereby increasing the pressure on the liquid. When the pressure is increased, it takes more energy for the liquid molecules to escape the surface, so the temperature at which the water will boil becomes higher. The boiling point in a pressure canner is approximately 250 degrees.



Pressure canners heat food to a higher temperature than water bath canners do.

In short, here is which canning method to use for which foods:

1. Use a water bath canner for acidic foods, such as pickles and many types of fruit.
2. *Always* use a pressure canner for low-acid foods, such as beans and meat, and for any recipes that combine low-acid with high-acid ingredients, such as salsa and soup.

Mountain-dwellers: Adjust for your altitude. Cooking at high altitudes can be weird. But the view is well worth it, so I bet you won't mind making a few adjustments for canning. Here's the rule: *More altitude = more time or more pressure.* Instructions on how to adjust for altitude will come with your canner.

All of this safety talk should be helpful, but if this is your first introduction to canning, it isn't enough information to get you started. To learn more, read "Home Canning Basics" at *www.MotherEarthNews.com.* (Also, check out our article on how much you can save with home food preservation, Page 40.) Be sure to follow all canning recipes carefully, use clean equipment and always discard any suspicious foods. If in doubt, throw it out!

—Tabitha Alterman, senior associate editor

Additional Resources

Methods and safety information:

Colorado State University Extension Service: www.ext.colostate.edu/

National Center for Home Food Preservation at the University of Georgia: http://uga.edu/nchfp/

University or Arkansas Division of Agriculture:
http://www.arfamilies.org/health_nutrition/food_preservation.htm

Mother Earth News: www.MotherEarthNews.com

Cooperative Extension: http://extension.psu.edu/food-safety/food-preservation

http://www.pickyourown.org/canning_methods.htm

www.freshpreserving.com

Local Library

Canning Equipment and Products:

Canning Pantry: http://www.canningpantry.com

Kitchen Krafts: http://www.kitchenkrafts.com/Ball

Home and Beyond: http://www.homeandbeyond.com

The canning Supply Co: www.canningsupply.com

www.amazon.com

To find a local farmers market, or farms near you that sell direct to customers, visit: www.localharvest.org or http://www.pickyourown.org/