



Preserving Fruits and Vegetables

Canning and freezing your home-grown fruits and vegetables is a rewarding chore. Follow along with our step-by-step preserving and canning instructions to preserve your home-grown food.

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About the Author

Cheryl Morrison gardens and cans at her second home in Vermont.

The snap of a bean pod and the juicy sweetness of a berry pie are among the many delights of harvest time, but you can enjoy these pleasures in any season if you know how to preserve--your home-grown food.

With a day or two spent on food preservation at harvest time, you will be able to put the flavors and colors of summer on your table during the darkest January days.

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- Fruits More Resources The keys to safe and successful home-grown food preservation are to start with fresh, unblemished foods and to prevent bacteria and molds from spoiling them. The most common methods of food preservation are canning and freezing.

Food Preservation Safety

Regardless of whether you are canning fruits and vegetables, freezing them, or serving them fresh from the garden or orchard, start by washing them until they are completely free of soil.

Many kinds of bacteria live in soil. Most kinds of soil-borne bacteria are harmless or even beneficial, but one deadly type is botulin, which causes the most feared kind of poisoning from canned foods.

Peach Chutney

Chutneys contain fruit and vinegar that makes them acidic enough to can safely with the boiling-water method. This chutney pairs well with poultry or meat, and you can spoon it from the jar for an excellent no-fuss omelet filling.

Ingredients

5 lbs. fresh peaches, peeled and sliced

2 lbs. dark brown sugar

6 medium-size tart apples, peeled and diced

2 tsp. lemon zest

1 medium onion, grated

2 cups of cider vinegar

1 tsp. paprika

1/3 cup lemon juice

1 T. yellow mustard seed

2 cups raisins



2 tsp. ground cumin
2 tsp. ground ginger

Preparation

Place the peaches in a large bowl and add the brown sugar and vinegar, stirring gently to avoid mashing the peaches. Combine the remaining ingredients in a 6-quart pot, cover and cook for 10 minutes over medium heat, stirring frequently. Add the peaches and bring the mixture to a boil. Lower the heat to a slow boil, leave the pot uncovered, and continue cooking the mixture for about 30 minutes, until the apple pieces disintegrate and thicken. Pack the chutney into seven or eight pint jars and process them in a boiling-water bath for 20 minutes.

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Although far less common than salmonella and other types of food poisoning, botulism is more often fatal. Botulin grows in the absence of air and it favors moist environments—exactly the conditions it would find inside a container of canned food.

Canning, when done correctly, kills botulin and other bacteria with heat; freezing immobilizes bacteria and prevents it from growing and spreading.

The cleanliness of your workspace and equipment is also essential to safe home-grown food preservation.

You can rid counters and cutting boards of bacteria by wiping them with a solution of one part bleach to nine parts water.

Carefully wash all knives, bowls and any rigid containers you will use for freezing. Sterilize canning jars and their lids as well as other equipment.

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Kettles and Pressure Canners

For canning high-acid foods such as tomatoes and many fruits, you can use an inexpensive kettle designed for water-bath canning (although a stock pot with a lid will suffice).

If you are canning low-acid foods, including meat, asparagus, peppers, beans, and most starchy vegetables, use a proper (i.e. more expensive) steam pressure canner.

Dilly Beans

Plain beans are low-acid foods that require pressure canning, but the vinegar used to make dilly beans makes them safe for the boiling-water method. Crisp and spicy, they add interest to a relish tray, and go well with most meat and fish.

Ingredients

4 lbs. green beans
1 ½ tsp. hot red pepper flakes
7 whole cloves of garlic, peeled
7 heads of fresh dill or 3 1/2 tsp. dill seed
1/2 cup pickling salt
5 cups white vinegar
5 cups water

Preparation

Wash the beans and trim ends so that the beans are one inch shorter than a pint jar. Do not snap the beans. Try to trim all the beans to the same length. Combine the vinegar, salt and water in a pot and bring to a boil. Meanwhile, sterilize seven pint jars. In the bottom of each hot, sterilized jar, put a clove of garlic, ¼ teaspoon of red pepper flakes and a dill head or ½ tsp. of dill seed. Pack the raw beans into the jars. Pour the vinegar and water solution over the beans, leaving an inch of headroom in the jars. Close the jars and process for 20 minutes in a boiling-water bath.



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Most water-bath kettles are made of dark, white-speckled enamel; the most popular sizes are 21- and 33-quart kettles.

Pressure canners, with capacities of 12, 16 or 22 quarts, are usually made of cast aluminum.

Both types generally come with removable wire racks that hold the jars in place and allow water to circulate under them.

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Jars and Other Canning Equipment

Quart, pint and half-pint jars for canning—along with other equipment you need—are available in supermarkets and hardware stores, especially at harvest time.

Flat, metal lids with seals and metal rings for holding the lids in place (called screwbands) are generally packaged with the jars, but can also be purchased separately. You can reuse the jars and the screwbands, but always inspect used jars for damage such as chips around the rim and cracks on the body, and use only those in perfect condition.

Never reuse the flat lids for canning because they bend when you open the sealed jar to remove its contents and because the rubber-like seals deteriorate.

You need a large pot for blanching or cooking the food you are canning. This pot should be enameled or made of stainless steel so that its metal does not react chemically with the food.

You also need a pot or a large saucepan for sterilizing the jars, lids and screwbands in boiling water. A teakettle is handy, too, in case you need to add hot water to the canning pot to cover the jars.

A few smaller items are also required: A roll of paper towels and a few clean, cloth towels A wide-mouth canning funnel A large, long-handled slotted spoon Large tongs for lifting the jars Smaller tongs for lifting the lids and screwbands from the sterilizing pot A slotted spoon A ladle

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How To: Basic Canning Procedure

Here are the basic steps for canning with the boiling-water-bath method. (Pressure canning uses the same procedure.)

1. Put the canning kettle, half-filled with water, on the stove to boil. Insert the removable rack and cover with the pot lid. Make sure the water is boiling before you begin filling jars with food.
2. Immerse the jars, lids and screwbands in boiling water in a second pot to sterilize them. If you are using more jars than the pot can hold, remove the sterilized jars one at a time as you use them and add unsterilized jars as space becomes available.
3. Fill the teakettle and put it on to boil, then prepare the food you want to can and cook it or blanch it, depending on the food.
4. Use tongs to remove a jar from the sterilizing pot, drain it, and use the canning funnel, slotted spoon and ladle to fill it with food. Leave headroom between the food and the jar rim to allow for expansion: a half-inch in pint jars, one inch in quart jars.
5. Remove the funnel and use a clean paper towel dipped in the boiling water to wipe the rim of the jar.
6. Using the smaller tongs, remove a lid from the sterilizing pot and set it on the jar, then remove a screwband from the boiling water and screw it onto the jar using a clean kitchen towel. Tighten the screwband only enough to hold the lid in place so the air can escape from the jar as it expands during the boiling-water bath.
7. Repeat steps 4 through 6 until all the jars are filled.
8. Lower the filled jars into the canning pot. You can lift the rack from the pot, put the jars in the rack and lower them all at



once, or you can leave the rack in the pot and use tongs to lower the jars one at a time. If the batch of food you are canning does not fill as many jars as the canning pot will hold, use jars filled with water as place holders to prevent the jars of food from falling over or colliding.

9. At the end of the processing time—which depends on the food—use the large tongs to remove the jars from the boiling water and set them on a towel spread out on a counter or tray. Allow the jars to cool at room temperature.

NOTE: Listen for clicks as the jars cool. Each jar lid clicks when the vacuum inside the jar pulls the lid into a concave shape. The click indicates the jar's seal is complete.

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Testing the Seals

When the jars have cooled for about 12 hours, perform two tests on them to make sure their seals are complete: First, press the lids. If you can depress a lid and it then springs back, the jar is not sealed and its contents should be used immediately or reprocessed. If you can depress the lid but it then stays concave, the seal may or may not be complete; the second test will tell. A lid that does not move when you touch it is a sign of a good seal, but perform the second test to be sure.

For the second test, remove the screwbands. Then, one at a time, put the jars in a pan that is lined with a clean towel and lift them by the edges of the metal lids. A weak seal will break under the weight of the jar, which will drop away from the lid and spill into the pan. If the seal is complete, the weight of the jar will not break it and the jar will stay attached to the lid.

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More Resources

Putting Food By, written by Janet Greene, Ruth Hertzberg and Beatrice Vaughan, and published by the Penguin Group, is a comprehensive guide to canning and freezing. It also covers other food-preservation techniques such as curing, root-cellar storage and it provides detailed instructions for preserving specific foods, including meats and fish, as well as produce.

Another source of information about food preservation is the U.S. Department of Agriculture's Extension Service, which has offices in many rural counties.

A wealth of information about canning, freezing and other food preservation methods is available on the Web. Among the sites worth exploring are these:

The National Center for Food Preservation offers detailed processing instructions, recipes and general information about various preservation techniques.

The Ohio State University Web site provides the Family and Consumer Science Series Index of fact sheets on a variety of subjects for homemakers, including several on food preservation.

At www.cooks.com, a search using the words "canning vegetables" produces dozens of recipes for relishes, pickles, soups and sauces, as well as canning instructions.

This University of Missouri site provides links to numerous "Quality for Keeps" pages on food preservation.

And don't forget the Ball Blue Book of Preserving, a staple of country kitchens everywhere. It's available almost everywhere and updated constantly with new information and recipes.

Top Pressure Canning

For low-acid foods—including meats, fish and most vegetables—only a pressure canner can produce high-enough processing temperatures to assure safety.

Put about two inches of water in the pressure canner and place the filled jars in its rack. Tighten the lid on the pressure cooker, but do not close the vents. Keep the canner on high heat until steam flows freely from the vents, then hold the heat at this temperature for 10 minutes before closing the vents. Processing time begins when the gauge on the canner



tells you that the pressure is at the recommended level. At the end of the processing time, remove the canner from the heat. Allow its temperature and pressure to fall naturally. When the pressure is down to zero, wait two more minutes before opening the vents and the lid. As you remove the lid and release steam from the pot, take care to direct the steam away from your body.

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Freezing Basics

Many fruits and vegetables hold their shape, color, texture and flavor better with freezing than with canning. Freezing also requires less time and effort.

The downside of freezing is that frozen foods deteriorate faster than canned goods. The maximum time for keeping frozen foods varies, but no frozen foods are worth keeping after 12 months.

Freezing changes the texture of some foods in an undesirable way, especially those with a high water content.

Foods that do not freeze well include celery, parsley, lettuce, cucumbers, potatoes and radishes.

The fats in meat, fish and poultry can turn rancid if they come into contact with air while frozen. This happens when air is trapped in their package, or when it penetrates the wrapping.

Adding salt before freezing can also increase the risk of rancidity.

To freeze these foods successfully, always wrap them carefully with airtight materials. If you store them in plastic bags, use only freezer-grade bags, remove the air before closing them and seal them securely.

Frozen foods should be kept at temperatures below zero degrees F to prevent the growth of botulin. When you thaw frozen foods, the bacterial growth resumes. To prevent dangerous bacterial growth, thaw food slowly in the refrigerator and use it immediately.

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Freezing Vegetables

Freezing is a safe way of preserving low-acid vegetables such as peas, string beans and carrots.

Other vegetables that freeze well: asparagus corn cauliflower broccoli okra peppers

After you cut the vegetables into pieces, blanch them in boiling water, steam or a microwave oven to kill the enzymes that can cause them to lose flavor and color quickly.

Cool the vegetables quickly by plunging them into ice-cold water before packing them in plastic bags and freezing them.

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Freezing Fruit

Fruit can be frozen in wet packs or dry packs. Wet-pack freezing uses liquid, which could be the fruit's own juice, water or simple syrup. Moist fruits like peaches and strawberries can be cut into pieces and mixed with sugar until the juice is drawn out and the sugar dissolves, then packaged and frozen.

Dry-pack freezing is an excellent way of preserving whole berries, including strawberries, cranberries, blackberries and currants, as well as figs and rhubarb. They hold their flavor, shape and color over many months, and they retain enough of their firmness for shortcakes, pies, muffins or just sprinkling on breakfast cereal. Dry-pack freezing requires no sugar or pectin, no cooking and no equipment other than a colander or wire basket, some cookie sheets and plastic freezer bags.

To freeze fruit in this way, wash it gently but thoroughly and then drain it using a colander or wire basket. Carefully remove stems and leaves from berries. Rhubarb stems should be cut into one-inch pieces; discard the rhubarb leaves, which are toxic.

Spread the fruit in a single layer on a cookie sheet and put it in the freezer. When it is frozen solid and hard to the touch, put the fruit into plastic bags intended for freezing. Close the bags carefully, removing as much air as you can without bruising the fruit, and put the bags in the freezer.



Fruit that is frozen in this way does not stick together, so when you are ready to use it, you can open a bag, shake out as much as you need, reseal the bag and return it to the freezer. If you freeze a half-gallon bag with equal quantities of strawberries and rhubarb pieces in season, you can pull it from your freezer in January for a pie that's nearly as good as one made from fresh ingredients in spring.

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