

## Fruit tips

Adding liquid to whole or cut up fruit in the jars helps remove air from food tissues, shrinks food, keeps food from floating in the jars, increases the vacuum in sealed jars, and improves shelf life.

Adding syrup to the fruit does not prevent spoilage. Sweeteners help fruit retain its flavor, color, and shape. A very light syrup approximates the natural sugar content of many fruits. Fruit juice (unsweetened apple, pineapple, or white grape juice) can be used instead of syrup. The best choice is juice made from the fruit that is being canned. To prepare such a juice, crush soft fruit, then heat and strain it.

Packing fruit in water is another option; however, water-packed fruits do not retain the flavor, color, and texture of the fruit. If artificial sweeteners are desired, add before serving.

An anti-darkening agent may be desired for fruits such as apples, apricots, nectarines, peaches, and pears to keep them from turning brown when cut. Ascorbic acid works best, and can be found where canning supplies are sold.

## Jams, jellies etc.

Jelly, made by cooking fruit juice with sugar, is firm and clear. Jam is made from pureed fruit cooked with sugar to make a thick spread. Preserves and conserves are pieces of fruit cooked with sweeteners and sometimes spices, nuts, etc.

Acid is required to enable the pectin to set jam or jelly and prevent crystallizing. Blueberries, elderberries, peaches, pears and most overripe fruits are low in acid. Fruits low in acid can be combined with those high in acid.

Pectin is a natural carbohydrate found in fruits, which in combination with sugar and acid, causes jam or jelly to set. It forms in the fruit during ripening. Pectin content is highest in under-ripe fruit and decreases as the fruit becomes fully ripe. Fruits high in pectin and acid are sour apples, sour cherries, crabapples, cranberries, red and black currants, gooseberries, grapes, lemons and damson plums. Quick cooking activates the natural pectin in fruit. Boiling too long or too slowly can reduce the gelling property of natural pectin found in fruit.

Jams and jellies without added sugar can be made by using special commercial pectins; however, some of these products may contain sugar or artificial sweeteners. Read labels carefully when deciding which products to purchase, and follow package directions precisely when using them. Using honey in place of sugar will result in a thinner jam.

**Jelly and jam tips:** Work in small batches, no more than 6-8 cups fruit at a time. Simmer fruit until it is soft before adding sugar. Jam is ready when a spoonful holds its shape on a cold saucer.

To make juice for jelly, heat cut up fruit. Crush bottom layer to release juices and add little or no water. Cook uncovered until fruit is soft and has lost its color. Drain juice from pulp with a moistened jelly bag for several hours or overnight. To ensure a clear jelly do not squeeze the bag. To make jelly, heat juice and add sugar. To test jelling, place a spoonful of the hot jelly on a cold saucer and put in the freezer for a few minutes to cool rapidly.

### Recipe: CHERRY-BERRY JAM

	<i>Makes about 4 half-pints</i>
5 cups blueberries or saskatoons	Puree fruit in food processor. Combine all ingredients except honey in a large non-reactive pot. Bring to boil quickly while stirring. Add honey and continue stirring. When mixture returns to a full boil, begin timing for approximately 25 minutes. Jam is ready when it resembles thick syrup.
3 cups sweet cherries, pitted	
¾ cup apple juice	
4½ tbsp. lemon juice	
1 cup honey	Fill hot jars, leaving ¼" head space, and seal. Process for 10 minutes.

## Resources

- USDA Complete Guide to Home Canning: [http://www.uga.edu/nchfp/publications/publications\\_usda.html](http://www.uga.edu/nchfp/publications/publications_usda.html)
- [Stocking Up](#) by Carol Huppig/Rodale Food Center
- [Animal, Vegetable, Miracle](#) by Barbara Kingsolver



**Fernie Community EcoGarden**  
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# Canning

The whole idea of home canning is a little intimidating for many people. You might be surprised to discover that it is easier than you think. The canning process involves placing foods in jars or similar containers and heating them to a temperature that destroys micro-organisms that cause food to spoil. During this heating process air is driven out of the jar and as it cools a vacuum seal is formed. This vacuum seal prevents air from getting back into the product bringing with it contaminating micro-organisms.

Recent studies find many canned foods are even more nutritious than their fresh counterparts. A 1997 study by the University of Illinois Department of Food Science and Human Nutrition found that canned fruits and vegetables provide as much dietary fiber and vitamins as the same corresponding fresh foods, and in some cases, even more. For example, canned pumpkin provides 540% of the Recommended Daily Intake of vitamin A, while fresh pumpkin only provides only 26%. Fresh foods begin losing vitamins as soon as they are picked, and often sit in warehouses or in transit for as long as two weeks before they find their way into the market to sit even longer waiting to be purchased. Fresh fruits and some vegetables are harvested before they are even ripe, and depend upon time and other means to reach the ripened state. Foods for canning are harvested at their peak of ripeness and normally cooked and processed from the source within hours, thus preserving more vitamins than their fresh counterparts.

## Canning terminology

**Headspace** – The unfilled space above food or liquid in jars. Allows for food expansion as jars are heated, and for forming vacuums as jars cool.

**Hot Water Bath** – A water bath canner is a large cooking pot with a tight fitting lid and a wire rack that keeps jars from touching each other and the bottom. The rack allows the boiling water to flow around and underneath jars for a more even processing of the contents. If a rack is not available, clean cotton dish towels or similar can be used to pack around jars. If a standard canner is not available any large metal container may be used as long as it is deep enough for 1 to 2 inches of briskly boiling water to cover the jars when they're placed on a rack in the pot. The diameter of the canner should be no more than 4 inches wider than the diameter of your stove's burner to ensure proper heating of all jars. For an electric range, the canner must have a flat bottom. Outdoor fire pits with a solid grate will also work, however close attention is required to insure proper boiling temperature.

**Pressure Canner** – A pressure canner is a specially-made heavy pot with a lid that can be closed steam-tight. The lid is fitted with a vent, a dial or weighted pressure gauge and a safety fuse. Newer models have an extra cover-lock as an added precaution. It may or may not have a gasket. The pressure pot also has a rack. Because each type is different, be sure to read the directions for operating.

**Clostridium botulinum** – A microorganism which causes Botulism, and is the main reason why pressure processing is necessary for all low-acid foods. Though the bacterial cells are killed at boiling temperatures, they may form spores that can withstand these temperatures. The spores grow well in low acid foods, in the absence of air, such as in canned low acidic foods like meats and vegetables. When the spores begin to grow, they produce the deadly botulinum toxins(poisons).

**pH** – A measure of acidity or alkalinity. Values range from 0 to 14. A food is neutral when its pH is 7.0: lower values are increasingly more acid; higher values are increasingly more alkaline.

**Hot-pack vs. raw-pack**– Hot packing is the best way to remove air from the fruit and is the preferred pack style for foods processed in a boiling water canner. Even though at first there may not seem to be a difference between hot-packed and raw-packed food, after even a short storage time, both the color and flavor of hot-packed foods will be superior. In addition, cooking preshrinks food so more can be packed into each jar. Raw-packing is the practice of filling jars tightly with freshly prepared, but unheated, food. Some cooks prefer to raw-pack small or soft fruits, such as berries, cherries, apricots, and plums, since it minimizes crushing.

*Because of the lower boiling point of water at high altitude, increase the processing time in the hot water bath 1 minute for each 1,000 feet above sea level if the time is 20 minutes or less. If the processing time is more than 20 minutes, increase by 2 minutes per 1,000 feet.*

Downtown Fernie is 3,300 ft.

## Using a boiling water bath to process pickles, fruits and vegetables:

- Wash all jars, lids and utensils in hot soapy water and rinse in hot water before using.
- Fill canner about 2/3 full with water and heat.
- Immerse empty jars and lids (set bands aside) into simmering water until ready for use.
- Remove jars to counter covered with a tea towel. Hot jars may crack if placed directly on a cold counter.
- Pack hot jars with hot prepared food, wipe rims and position lids. Screw on bands.
- With canner rack up, arrange jars in rack and lower into boiling water bath.
- Begin timing when water in canner reaches full boil. Maintain boil for full processing time.
- Raise rack and remove jars from canner to a towel-covered counter, away from cold drafts, with jar lifter tool.
- Wipe down jars and store in a cool, dark place.
- Check seals after 24 hours. Lids should not flex up and down when center is pressed.
- Any jars that don't seal properly can be re-processed or contents can be refrigerated and used right away.

## Pickle Tips

What You'll Need to Make Pickles

**Pickling Cucumbers** – If you want to make cucumber pickles, be sure to use pickling cucumbers. They're easy to recognize since they look like pickles. If you use regular cucumbers, you'll end up with mushy pickles. Always cut 1/16-inch off the blossom end of pickling cucumbers before making pickles. That area of the cucumber contains an enzyme that can make pickles soft.

**Vinegar** – Vinegar is what gives pickled foods their “bite” and what makes them safe for home canning. For safety, always use a vinegar labeled at least “5% acidity”. Check the label before using herb or flavored vinegars, as these may not be high enough acid. White vinegar has a sharper “bite” than cider vinegar and also gives a clear brine. Cider vinegar has a mellower taste than white vinegar, but will give a darker color.

**Pickling or Canning Salt** – This is basically salt, with no added iodine or anti-caking additives as found in table salt. The anti-caking additives can produce a cloudy brine and a sediment in the jar. Iodine can make pickles dark. Since pickling salt usually comes in 2-lb. bags, you may have a lot leftover. You can use it like regular table salt. However, because it doesn't contain anti-caking additives, it may clog the salt shaker. Pickling salt is found in the salt section or home canning section at your grocery store.

**Stainless steel saucepans** – Don't use iron, copper, brass or galvanized saucepans for heating pickling liquids. A reaction between the vinegar and these metals will affect the color, flavor and even safety of the pickles. Aluminum pans are OK for short heating times. Don't let a pickling solution sit for too long in an aluminum pan or the pan may discolor.

**Fairly soft water** – Really hard water contains iron and copper, which can affect the color and texture of pickles. If your water is very hard, use distilled water in the pickling solution. Otherwise, boil hard water for 15 minutes and then let set, covered, for 24 hours. Slowly pour the water into a container, leaving the sediment behind.

## Recipe: BREAD & BUTTER PICKLES

15 medium cucumbers

½ cup salt

5 medium onions

5 cups vinegar

½ cup honey

2 tsp celery seeds

2 tsp ground ginger or 2 Tbs fresh

1 tsp turmeric

2 tsp mustard seed

*Makes about 6 quarts or 12 pints*

Wash cucumbers and slice thin. Do not peel. Cut onion into thin slices and combine with cucumbers, salt and ginger.

Let stand covered at room temp for 3 hours. Drain well.

Combine remaining ingredients in a large pot and bring to a boil. Add drained cucumbers and onion and heat thoroughly but do not boil.

Pack into clean hot jars leaving 1/8 inch head space. Seal immediately. Process 5 minutes in boiling water bath.

## Tomatoes

### Selecting Tomatoes for Canning

To ensure that you produce the best product possible when canning, you must start out with fresh ripe tomatoes. Following the guidelines below will help produce the best canned product possible.

- Select produce that is fresh, at the proper maturity for best quality of ripeness, and blemish free. Ripe tomatoes should yield to light pressure, but not be too soft.

- Tomatoes that are fresh from the garden or purchased from a local farmers market will produce better results than those purchased at a supermarket.

- If purchasing or harvesting tomatoes that will not be canned for a few days, select those that are a lighter red and allow them to ripen fully by storing them in a cool area out of the direct sunlight.

- Do not store ripe tomatoes in the refrigerator because this will cause them to become pulpy and lose their flavor. Store at room temperature and out of the sunlight. Ripe tomatoes should be canned within a few days.

### Recipe: FAMILY SECRET TOMATO SAUCE

from *Animal, Vegetable, Miracle* by Barbara Kingsolver

The point of this recipe is to make a large amount at one time, when tomatoes are in season. If you're canning it, stick closely to the recipe; adding additional fresh vegetables will change the pH so it's unsafe for water-bath canning. If you're freezing it, then it's fine to throw in peppers, mushrooms, fresh garlic, whatever you want. This recipe makes 6-7 quarts – you can use a combination of pint and quart canning jars or freezer boxes.

10 quarts tomato puree (about 30 lbs. tomatoes)

4 large onions, chopped

1 cup dried basil

½ cup honey

4 tbs. dried oregano

3 tbs. salt

2 tbsp ground lemon peel

2 tbsp. thyme

2 tbs. garlic powder (or more, to taste)

2tbs. dried parsley

2 tsp. pepper

2 tsp cinnamon

½ tsp nutmeg

Lemon juice or citric acid \*

*Makes 6 -7quarts*

Soften onions in a heavy 3-gallon kettle – add a small amount of water if necessary but no oil if you are canning (very important!). Add pureed tomatoes and all seasonings, bring to a boil, and simmer on low heat for two to three hours until sauce has thickened to your liking. Stir frequently, especially toward the end, to avoid burning. Meanwhile, heat water in canner bath, sterilize jars in boiling water or dishwasher, and pour boiling water over jar lids.

\* Bottled lemon juice or citric acid – NOT optional! Add 2 tbsp of lemon juice OR ½ tsp. citric acid to each quart jar, (half that much to pint jars). This ensures that the sauce will be safely acidic. When the sauce is ready, ladle it into the jars leaving ½ inch headspace. Put jars into canner and process for 35 minutes. Remove, cool, check all seals, label and store for winter.

### Recipe: TOMATO SALSA

8 cups tomatoes, chopped finely

1½ cups onions, coarsely chopped

½ cup green pepper, coarsely chopped

½ cup red pepper, coarsely chopped

6 -7 cloves garlic, finely chopped

¼ cup coriander, finely chopped

2/3 cup red wine vinegar

1 tablespoon salt

1 teaspoon white (or black) pepper

*Makes 6 pints*

Combine all the ingredients in a large pot and bring to a boil over medium-high heat. Reduce the heat to medium once it comes to a boil. Simmer, stirring often, for 10 minutes. Remove from heat and ladle into hot, sterilized jars. Seal and process in a boiling water bath for 10 minutes if the salsa is to be stored for a while.

If you do not process the salsa in the boiling water bath it must be eaten within a few days.