

Canning Know-How

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Terms to Know

Botulism:

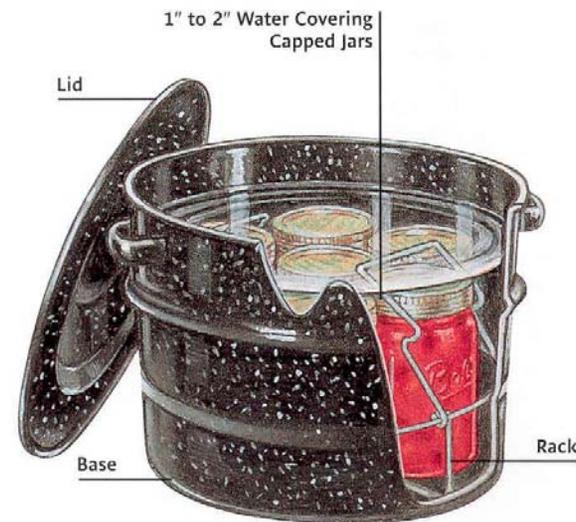
This is a food poisoning caused by bacteria that produce a spore that throws off a strong toxin which can be deadly. The spore can not be destroyed at boiling temperature of



212°. These bacteria thrive in low acid foods in the absence of air. Only pressure canning produces temperatures high enough (240°) to destroy the spore.

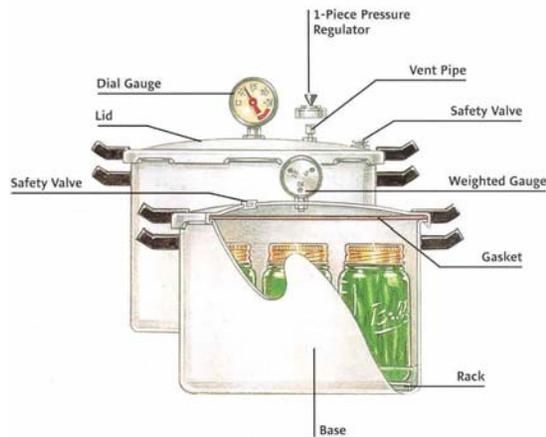
Boiling-Water Canner:

A large heavy metal kettle with a wire rack and tight-fitting lid that is tall enough for water to cover canning jars by 1-2 inches and still have space to allow for brisk boiling of the water. It is only used for processing acid foods like tomatoes, pickles, jams and jellies.



Steam-Pressure Canner:

A specially made heavy metal kettle with a lid that can be closed steam tight. The lid is fitted with a vent (or petcock), pressure gauge (dial or weighted), and a safety valve.



Pressure canning is required for canning all meats, poultry, seafood, and low acid vegetables (which means all vegetables except plain tomatoes and pickled products).

Fermentation:

Changes in food caused by intentional growth of bacteria, yeast or mold. Acts as a major flavoring and preservative in sauerkraut and naturally fermented pickles. Can also be caused by yeasts which have not been destroyed during processing of canned foods. These foods should be discarded.

Ascorbic Acid:

Chemical name for Vitamin C. Used to prevent browning of peeled, light color fruits (apples, peaches, pears) and vegetables (potatoes and mushrooms).



Citric Acid*:

Found in oranges, lemons, and limes. Used in food preservation to increase acidity. Found in powdered form in grocery stores.



* Tomatoes of any color, because of their borderline acid content, should be acidified by adding 1 tablespoon of bottled lemon juice per pint (2 tablespoons per quart), or 1/4 teaspoon citric acid per pint (1/2 teaspoon per quart).

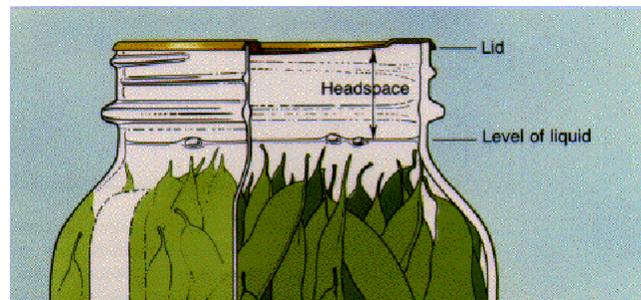
Canning or Pickling Salt:

Salt made without anticaking additives that can cause a cloudy brine. Also does not contain iodine that can cause black spots on pickles.

Head Space:

This is the air space in the jar between the inside of the lid and the top of the food or its liquid. Here are some guidelines:

- juices, jams, jellies, pickles, relishes: **1/4"**
- acid foods (fruits, tomatoes): **1/2"**
- low-acid foods (vegetables, meats): **1"**



Pectin:

The substance in fruits that help form a gel, with the right combination of sugar and acid. Commercial pectins (liquid or powder) is required for some types of spreads.

Fruits high in natural pectin:

tart apples, concord grapes, sour blackberries, cranberries, currants, gooseberries, sour plums

Fruits low in natural pectin:

apricots, strawberries, blueberries, cherries, peaches, pineapple, and rhubarb

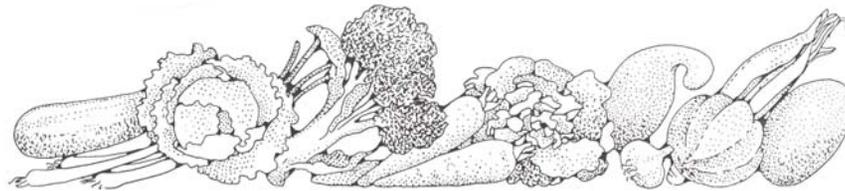
Pickling:

A process of preserving any fruit, vegetable, or meat in vinegar or brine.



Start With The Best

1. Harvest or purchase only top-quality produce that is fresh and firm. Do not use over-ripe, bruised, or diseased fruits and vegetables.



2. Process as quickly as possible after picking (within 6 to 12 hours is best). Note that apricots, peaches, pears, plums, and nectarines should be ripened one or more days after picking before processing.

3. Use canning or pickling salt. Table salt contains anticaking agents and iodine that can cause cloudiness in the brine or discoloration of the produce. Do not use salt substitutes or reduced amounts of salt in pickled products. Pickled products depend on salt for proper fermentation. Substitutes are also not recommended in regular canning since they tend to become bitter when heated. They are best added at the table if needed.

4. Sugar helps retain color, flavor and shape. Avoid using sugar substitutes, since they can become bitter when heated. Can fruit in water or unsweetened juice and add the substitute when serving.



Use **ONLY** jars & Lids Made for Canning

- Check each jar for cracks, chips or nicks. **NEVER** reuse food containers such as mayonnaise, spaghetti sauce, or peanut butter jars. They may not seal and tend to break more easily.
- **Jars Available:**
 - 1/2 pint (1 cup)
 - pint (2 cups)
 - quart (4 cups)
 - regular mouth (2-3/8" opening)
 - wide mouth (3" opening)
 - freezer jars & decorator jelly jars (8 & 12 ounce)



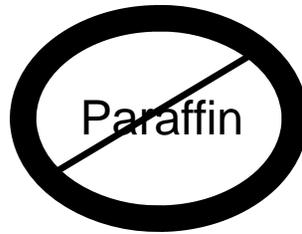
- **Lids:** Have a self sealing rubber gasket that softens during processing. When jars cool the gasket forms a tight seal. Be sure to follow manufacturer's recommendations for preparing the lids for canning. Most lids should **not** be boiled before using.



Always use new lids. If a jar does not seal, you will need to use a new lid if you decide to reprocess the product. After the jars are cooled (usually overnight is sufficient), the screwbands should be removed, washed and stored. The screwbands may be reused as long as they are not rusted, bent or the threads are not stripped.

Save The Wax For Candles

Paraffin is **no longer recommended** for sealing jams and jellies.



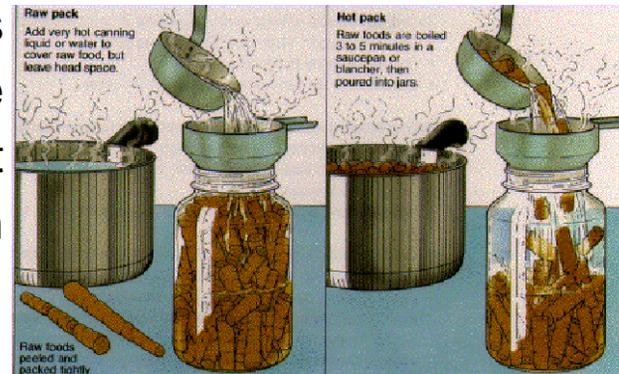
Do not eat any jam or jellies that contain mold. Even scraping a small amount of mold from the top of a jam or jelly does not assure safety.

All jams and jellies should be processed in a boiling water bath canner for 10-15 minutes to assure a proper seal.

What's the Difference?

Raw pack or cold pack: Unheated, freshly prepared food is packed into hot jars and boiling liquid is poured over food. With this method there is some shrinkage and floating of food.

Hot pack: Freshly prepared food and liquids are boiled together and then packed into hot jars. Foods are easier to pack into jars because they are softer and more can be put into each jar. Hot pack can result in better color and flavor.



No Cheating Please!!!!

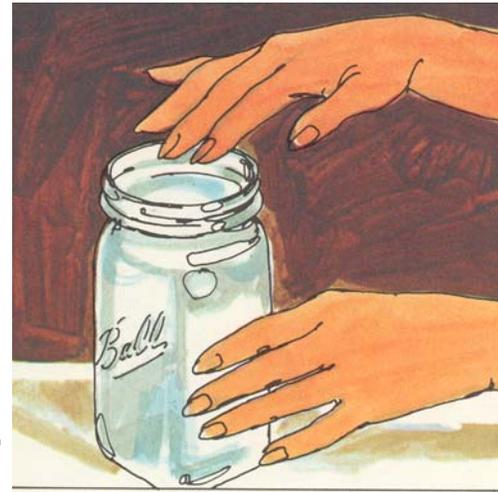
Do **not** change recommended processing times or procedures.



You will be short-cutting both quality and more importantly.....your safety.

Easy Steps to Canning

1. Examine jar tops



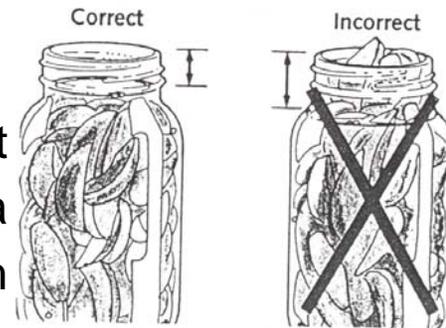
2. Examine screw bands and lids.

Check manufacturer's

recommendations for preparing lids. **Do not boil lids.**

3. Fill jars with hot foods and liquids. Leave proper head space in jar. If filled too full, food can overflow and ruin seal, prevent an improper vacuum.

4. Remove air bubbles from foods except jams, jellies, and juices. Do not use a metal knife. This can scratch the jar, which can weaken it.



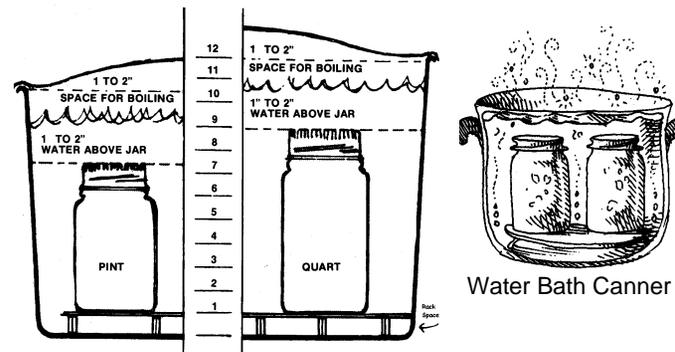
5. Use a damp clean cloth to wipe jar tops and threads clean. Cover with hot lid and screw band. Screw firmly (not extra tight).



6. Processing: Boiling Water Canner: (for acid products)

Partially fill canner with hot water and bring it simmer. Place filled jars on rack and carefully lower into canner or use tongs and place in canner on rack. Cover jars with hot water, and bring back to a low boil. Cover canner. Start processing time.

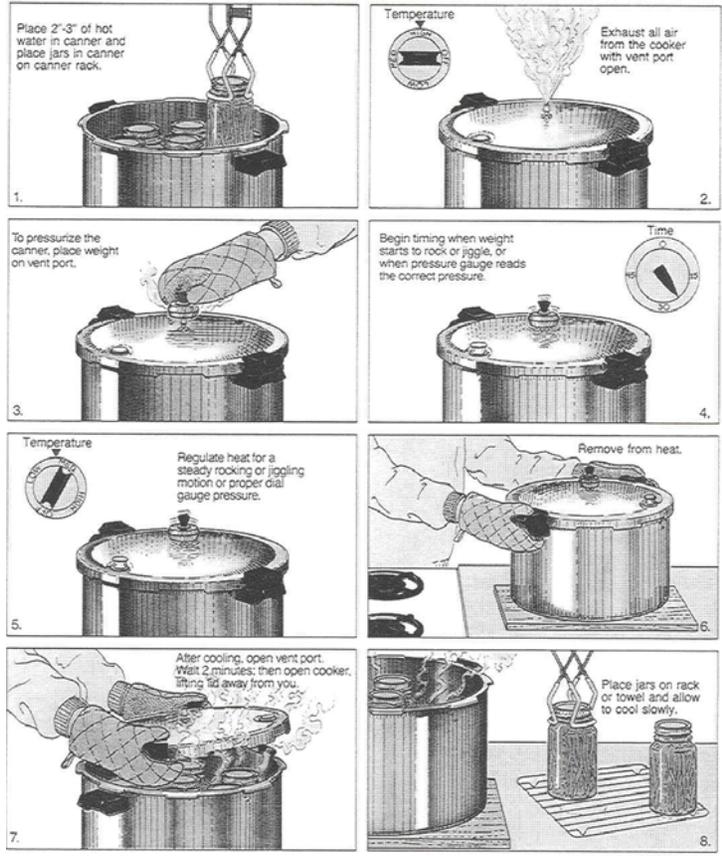
When proper time is reached, turn off heat and remove jars. Place on dry towel, 1" apart, out of draft. Cool overnight. **Do not retighten lids after processing.**



Pressure Canning: (for low acid products)

Partially fill canner with hot water (2-3 inches deep). Place filled jars on rack in canner. Place lid on canner. Leave petcock open to exhaust steam from canner for about 10 minutes. Close petcock and build pressure to require pounds. Start timing when you reach the proper pressure.

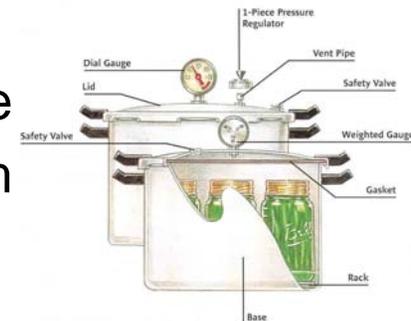
When time is done, turn off heat and let canner cool without removing canner lid or opening petcock for 20-30 minutes. Test to see if pressure is down by slightly opening petcock. If no “hissing” is heard, you can safely remove the canner lid. Open lid away from you to avoid steam coming into your face. Remove jars and cool as noted before.



For Safety Sake!!!

Pressure Canning is the only safe method for canning meats, poultry, seafood and low acid vegetables (which means all vegetables except tomatoes, and pickled products).

Using boiling water canners for these foods poses a real risk of botulism poisoning.



Even a small taste of food containing this toxin can be fatal.

Forget Grandma's Open Kettle Method

Pouring hot foods into hot jars and putting on the lids and bands is called "open kettle" method.

This is not recommended for any types of canning, including jams, jellies, and pickles.



At Home On the Range?.....Not Always

Do **not** use canners on glass top ranges. Their large diameters combined with the heavy weight of filled jars can damage the range.

“Pop” Goes the Seal

Most jars will seal with a “pop” sound while cooling. However it is important to check to be sure each jar is sealed after the jars are completely cooled (usually after 12 to 24 hours or overnight).

The best way to test for a seal is to remove the screw band (or take down the wire bail on older jars), and see if you can remove the metal lid by hand. If the lid comes off in your hand, it was not properly sealed.

This product must either be:

- refrigerated and used within 2-3 days
- recanned using a new lid and complete processing time
- put into a freezer container and frozen to preserve



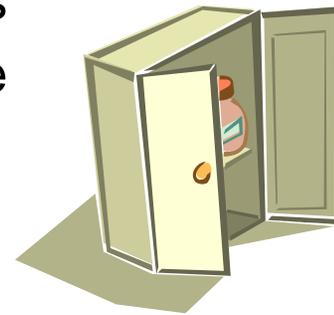
Store with screw bands off (or replace wire bail).

Make Sure Jars Keep Their Cool

Store canned products in a clean, cool, dark, dry place.

Do not store canned products in warm areas like an attic, direct sunlight, near hot pipes, range, or furnace.

Check periodically to make sure jars continue to be sealed and non have spoiled.



Never Taste Food That You Are Unsure Of

Do not eat if there is any sign of odor; discoloration; slimy texture; bulging lid; gas or rising bubbles; cotton like mold on top of food or under lid; or cloudy liquid.



Some foods may show little sign of spoilage.

If in doubt, throw it out!!!

Discard suspect food carefully in garbage bags. Botulism can kill a pet also.

Savor the Sweetness of Summer Fruit

To prevent apples, apricots, peaches, nectarines and pears from darkening:

1. do not expose cut fruit to air
2. while preparing a canner load of jars keep peeled, cut fruit in a solution of either:
 - 1 teaspoon ascorbic acid to 1 gallon cold water **or**
 - 2 Tablespoons salt to 1 gallon cold water **or**
 - Use a commercial product according to manufacturer's directions.

Note that fruits packed in water have a tendency to turn brown so use commercial products in canning solution to prevent.

Pickles

For fruit pickles, either whole or pieces of fruit are simmered in spicy, sweet-tart syrup. White granulated sugar should be used since brown sugar, corn syrup and honey may produce undesirable flavors (unless specified in your recipe).

Do **not** alter portions of vinegar, food product or water. Make sure ingredients are thoroughly mixed.

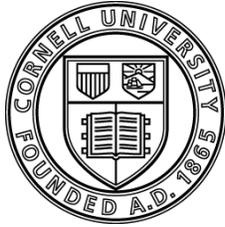


Process in boiling water bath canner.

For heating liquids, do **not** use copper, brass, iron, or galvanized utensils. They react with acids and affect color, flavor, & even safety.

FOOD PRESERVATION RESOURCES

- **“Food Preservation Resources”** lists all food preservation publications available from Cornell Cooperative Extension of Herkimer County including some commercial sources and web sites. Topics included are home canning, freezing, pickling, dehydrating, and making jams and jellies. For your free copy, stop in our office at 5657 State Route 5 in East Herkimer, or get a copy on our website at www.cce.cornell.edu/herkimer/2009/04/02/food-preservation-resources/
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- *Ball Blue Book* - The Guide to Home Canning, Freezing, and Dehydration 1-800-240-3340 **or** visit their website at www.freshpreserving.com
- National Center for Home Food Preservation Website at: <http://homefoodpreservation.com>



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