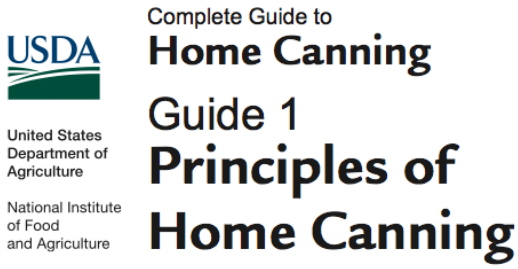
Posse+Plus, Wood County Texas
Home Canning

A great resource for safe home canning is the USDA online Home Canning Guide.
http://nchfp.uga.edu/publications/publications_usda.html



Another great resource is a book called *Putting Food By, Fifth Edition* written by Janet Greene, Ruth Hertzberg, and Beatrice Vaughan. The book follows the USDA recommendations for canning meats, fruits, and vegetables, and includes recipes for jellies, jams, pie fillings, pickles, and relishes. It also includes chapters on curing, drying, and root-cellaring.

Safe Canning Methods

There are three safe ways of canning, depending on the type of food being canned. These are the boiling water bath method, atmospheric steam canner method, and the pressure canner method.

Preparing the Jars & Lids:

Examine jars and discard those with nicks, cracks and rough edges. These defects will not permit an airtight seal on the jar, and food spoilage will result. All canning jars should be washed in soapy water, rinsed well and then kept hot. This could be done in the dishwasher or by placing the jars in the water that is heating in your canner. The jars need to be kept hot to prevent breakage when they're filled with a hot product and placed in the canner for processing. Jars that will be filled with food and processed for less than 10 minutes in a boiling water bath canner need to be sterilized by boiling them for 10 minutes.

Methods of Pack

Fruits and vegetables may be packed raw or they may be preheated and then packed into canning jars. The hot pack yields better color and flavor, especially when foods are processed in a boiling water bath. For both raw pack and hot pack, there should be enough syrup, water or juice to fill in around the solid food in the jar and to cover

the food. If not covered by liquid, food at the top tends to darken and develop unnatural flavors. It takes from ½ to 1½ cups of liquid for a quart jar.

Raw Pack:

For this method put raw, unheated food directly in jars. Pour boiling hot water, juice or syrup over the food to obtain proper headspace. Fruits and most vegetables packed raw should be packed tightly because they will shrink during processing; however, corn, lima beans, potatoes and peas should be packed loosely because they expand during canning.

Hot Pack:

For this method, heat the food to boiling (or cook it for specified time) and then pack the hot food and boiling hot liquid in jars. Shrinkage has already taken place, so pack foods loosely enough to allow food to be surrounded by liquid.

Boiling Water Bath Method

The boiling water bath method is safe for fruits, tomatoes and pickles as well as jams, jellies and other preserves. In this method, jars of food are heated by being completely covered with boiling water (212 °F at sea level).

High-acid foods (pH of 4.6 or less) contain enough acid that the Clostridium botulinum spores can't grow and produce their deadly toxin. High-acid foods include fruits and properly pickled vegetables. These foods can be safely canned at boiling temperatures in a boiling water bath. Tomatoes and figs have pH values close to 4.6. To can these in a boiling water bath, acid in the form of lemon juice or citric acid must be added.

The 21.5 quart Granite Ware 0707-1 **water bath canner** holds up to 7 one-quart jars, 9 one-pint jars or 13 half-pint jars. It sells for $45 on Amazon. This canner will work on gas, electric, radiant, and induction burner stoves.

The Granite Ware water bath canner cannot be used for pressure canning.

Steps for Boiling Water Bath Method

Use the boiling water bath method only to preserve high-acid foods such as fruits, tomatoes and pickles.

Fill the canner about halfway with hot water. Turn on the burner and heat the water.

For raw-packed jars, have the water in the canner hot, but not boiling, to prevent breakage of the jars when they're placed in the canner. For hot-packed jars, use hot or gently boiling water.

Fill a single jar at a time, as described above in "Methods of Pack", allow proper headspace, remove air bubbles, and adjust lids as described below, then place the filled jar in the canner.

Allow the proper headspace, according to processing directions for specific foods, in order to remove all the extra air during processing, and to form a tight vacuum seal.

Run a bubble freer or any plastic or rubber-like utensil around the edges of the jar, gently shifting the food, so that any trapped air is released. Add more liquid as needed to the jar to ensure proper headspace.

Wipe off the rims of the jars with a clean, damp cloth.

Screw on the lids, but not too tightly—air needs to escape during processing.

Put filled glass jars on the rack in the canner. Add more boiling water or take out some as needed so that the water is at least 1 inch over the tops of the jars. If you add more water, pour it between the jars, not directly on them, to prevent breakage. Put the lid on the canner and set the heat to its highest setting.

When the water in the canner reaches a rolling boil, begin counting the correct processing time. Adjust the heat to maintain a gentle and steady boil, and add more boiling water as necessary.

If the water stops boiling at any time during the process, turn the heat on its highest setting, bring the water back to a vigorous boil, and begin the timing of the process over, from the beginning (using the total original processing time).

When the jars have been processed in boiling water for the recommended time, turn off the heat and remove the canner lid. Wait 5 minutes before removing jars.

Use a jar lifter to carefully remove the jars. Place the hot jars right side up on a cake cooling rack or dry towels to prevent the jars from breaking on contact with a cold surface.

Avoid placing the jars in a cold draft. Do not cover with or wrap jars in towels. Leave at least 1 inch of space between jars.

Allow the jars to cool untouched for 12 to 24 hours. Do not tighten the ring bands on the lids and do not push down on the center of the flat metal lids until the jars are completely cooled.

NOTE: If you are at an altitude of 1,000 feet or more, boil an additional minute for each 1,000 feet of additional altitude. Jars processed in a boiling water bath canner for 10 minutes or more in a pressure canner will be sterilized during processing. Be sure to use new two-piece lids. Follow the manufacturer's instructions for treating them. Some lids do not need to be heated at all, others need to be brought almost to a boil and then left in hot water, while a few need to be boiled for a period of time.

Atmospheric Steam Canning Method

(https://fyi.extension.wisc.edu/safefood/2017/10/24/safe-preserving-using-a-steam-canner/?ss_redir=1)

An atmospheric steam canner may be safely used for canning naturally acid foods such as peaches, pears, and apples, acidified-foods such as salsa or pickles and jams and jellies as long as all of the following criteria are met:

- Foods must be high in acid, with a pH of 4.6 or below. Either a boiling water canner or a steam canner can be used to safely preserve foods high in acid.
- A research tested recipe developed for a boiling water canner must be used in conjunction with the steam canner. Approved recipes can be

found in Extension publications or from the National Center for Home Food Processing and Preservation. **The booklet accompanying the atmospheric steam canner can't be relied on to provide safe canning instructions!**

Steps for Atmospheric Steam Canning Method

- Jars must be processed in pure steam at 210-212°F. Temperature should be monitored with a thermometer placed in the vent port. Steam has to flow freely from the canner vent(s) during the entire process, or the food is considered under-processed/unsafe. Some appliances come with a built-in temperature sensor in the dome lid which, in lab testing, appears to be accurate.
- Jars must be heated prior to filling and filled with hot liquid (for either raw or hot packed foods). Tested recipes approved for half-pint, pint, or quart jars may be followed.
- Processing time must be modified for elevation as required by a tested recipe.
- Processing time must be limited to 45 minutes or less, including any modification for elevation. The processing time is limited by the amount of water in the canner base. When processing food, the canner should not be opened to add water. Regulate heat so that the canner maintains a temperature of 210-212° A canner that is boiling too vigorously can boil dry within 20 minutes. If a canner boils dry, the food is considered under-processed and therefore potentially unsafe.
- Cooling of jars must occur in still, ambient air. Cooling is important for safety. Jars should be cooled on a rack or towel away from drafts. Jars should not be placed in the refrigerator to hasten the cooling process.

For example, here's how it works if you are canning strawberry jam: You prepare the fruit and boil with sugar and pectin as directed. Once the hot jam is filled into hot, sterile jars and the 2-piece lid applied (as directed), the jars are placed on the rack in the canner and covered with the dome lid.

The heat is turned to high, and when you see a column of steam vent from the sides or top of the lid, check the temperature to make sure the canner is filled with steam (210-212°F). When temperature is reached, set a timer to the processing time indicated in your recipe.

At the end of processing, turn off the heat and carefully remove the dome lid (Caution: it's filled with steam). Use your jar lifter to remove jars and place on a towel or rack for cooling. And you are done. With much less water to heat than in boiling water canner, I can guarantee that you will find this a quick and easy way to process acid foods.

Pressure Canning Method

Pressure canning is the only safe method of canning low-acid foods (those with a pH of more than 4.6). These include all vegetables, meats, poultry and seafood. Because of the danger of botulism, these foods must be canned in a pressure canner. Jars of food are placed in 2 to 3 inches of water in a pressure canner and then heated to a temperature of at least 240 °F. This temperature can only be reached in a pressure canner.

Pressure Canners

The All American model 1930 canner is an industrial strength **pressure canner**. Made from cast aluminum, with sturdy screws to seal the lid to the pot, this pressure cooker requires no rubber or plastic gaskets or rings. Its 15-1/2-quart capacity holds 10 pint jars or 7 quart jars. A three-setting pressure regulator valve is included, and the pressure gauge gives a clear reading. Made in Wisconsin, this is an American classic. It can be used for water bath canning of pints and quarts as well. It sells for $380 on Amazon.

This canner should last for decades but it is heavy. It will work on gas, electric, and radiant burner stoves. It will not work on induction burner stoves.

The 23 quart Presto model 01781 **pressure canner** is more than adequate for any home canning needs. It's a professional-quality tool, made of heavy-duty aluminum, with stay-cool handles and a strong-lock steel lid. An accompanying rack fits down into the pot to keep jars up off the bottom, so that liquid can circulate underneath. It can be used for water bath canning of pints and quarts as well. It sells for $141 on Amazon.

This canner will need the gasket replaced periodically. If the dial gauge is used for pressures less than 15 psi it will need to be calibrated. The recommendation is once a year. It will work on gas, electric, and radiant burner stoves. It will not work on induction burner stoves.

Steps for Pressure Canner Method

Remember that pressure canning is the only safe method of processing low–acid foods such as vegetables, meat, poultry and fish. Be sure to read your manufacturer's instructions on the use of your pressure canner. Dial-gauge canners must be tested for accuracy every year before the canning season.

Place 2 to 3 inches of water in the canner. Add a couple tablespoons of vinegar to prevent mineral buildup on the canning jars. It should be hot, but not boiling, when canning raw-packed food; hot or gently boiling for hot-packed foods. Make sure you still have 2 to 3 inches of water when you are ready to load the canner.

Fill the jars as described above in "Methods of Pack". Allow proper headspace, remove air bubbles, wipe jar rims and put on lids.

Set the jars of food on the rack in the canner so steam can flow around each jar. Fasten the canner lid so that no steam begins to escape except through the vent. Turn heat to high and watch until steam begins to escape from the vent. Let the steam escape steadily for 10 minutes. This step is necessary for all pressure canners to remove air that could otherwise lower the temperature and result in underprocessing.

Close the vent using a weight, valve or screw, depending on the type of canner. If you have a weighted-gauge canner that has a weight of varying pressures, be sure you are using the correct pressure.

For a dial-gauge canner, let the pressure rise quickly to 8 pounds of pressure. Adjust the burner temperature down slightly and let the pressure continue to rise to the correct pressure. (If the burner were left on high, the pressure would be hard to regulate when the correct pressure is reached.) Start counting the processing time as soon as the pressure is reached.

For weighted-gauge canners, let the canner heat quickly at first and then adjust the heat down slightly until the weight begins to rock gently or "jiggle" two to three times per minute, depending on the type of canner you have. Start counting the processing time as soon as the weight does either of these.

Adjust the heat under the canner to maintain a steady pressure at, or slightly above, the correct gauge pressure. If the pressure goes too high, turn down the heat under the canner. Do not lower the pressure by opening the vent or lifting the weight.

Loss of pressure at any time can result in underprocessing or unsafe food. If at any time the pressure goes below the recommended amount, bring the canner back to pressure and begin the timing of the process over, from the beginning (using the total original processing time).

When the processing is completed, carefully remove the canner from the heat. If the canner is too heavy, simply turn it off.

Let the pressure in the canner drop to zero. This will take 30 to 45 minutes in a standard heavy-walled canner and nearly an hour for a larger 22-quart canner. Newer thin-walled canners depressurize more quickly. Do not rush the cooling by setting the canner in water or by running cold water over the canner. Never lift the weight or open the vent to hasten the reduction in pressure. Forced cooling may result in food spoilage.

Older canners are depressurized when the gauge on a dial-gauge canner registers zero or when a gentle nudge to the weight on a weighted gauge canner does not produce steam or resistance. New canners are equipped with a safety lock. These canners are depressurized when the safety lock drops to normal position. When the canner is depressurized, open the vent or remove the weight. Wait ten minutes and then open the canner.

Sometimes safety locks that are located in the handle of a canner will stick. If a nudge to a canner weight shows that it is depressurized, remove the weight, wait 10 minutes and then run a knife blade between the handles to release the lock.

Unfasten the lid, and tilt the far side up, so the steam escapes away from you. Do not leave the jars in the closed canner to cool, or the food inside could begin to spoil.

Use a jar lifter to carefully remove the jars from the canner. Place the hot jars on a cake cooling rack or dry towels, right side up to prevent the jars from breaking on contact with a cold surface. Leave at least 1 inch of space between the jars.

Do not tighten the lids. Allow the jars to cool, untouched for 12 to 24 hours.

Thickeners

Flour and cornstarch should not be used when canning. Modified starches can be used in place of flour or cornstarch for thickening.

Modified starches include Clearjel, Instant ClearJel, and Thermflo.

ClearJel works well with acidic ingredients, tolerates high temperatures, but breaks down if frozen and thawed. It works well in preparing canned pie filling because the sauce remains thin during processing to allow heat to penetrate the jar completely and safely. The filling thickens in the jar after jars are removed from the canner. It is the only thickener recommended by the USDA for use in home canning. Care should be taken not to exceed

specified amounts of thickener in canning recipes because excess starch can create heat penetration problems during processing and cooling. ClearJel is not designed for freezing. This type of ClearJel is sometimes referred to as regular ClearJel to distinguish it from the instant type.

Instant ClearJel, a pre-gel starch, is already cooked. Because Instant ClearJel thickens without cooking, it is **not suitable for canned** pie fillings. It is freezer stable. It also tolerates high temperatures and gradually increases in thickness during heating. It may be frozen before or after cooking. When baking with Instant ClearJel, increase the oven temperature and reduce the baking time to prevent "oven boil out". Bake or freeze products with Instant ClearJel soon after preparation to avoid thinning of the product by enzymes on standing. Instant ClearJel is excellent for use in fruit pies to be frozen before or after baking.

ThermFlo provides good body and works well in high or low acid foods. ThermFlo has the strongest freeze-thaw stability of these starches. It tolerates high temperatures and long processing times. ThermFlo is an acceptable alternative to use in canned pie fillings because it is also stable during heating and exhibits about the same viscosity during heating as regular ClearJel. It also has the added advantage of holding up well during storage.

How are modified starches added to food products? ClearJel and ThermFlo are used the same way cornstarch is; Mix in a small amount of cold water or sugar to separate starch granules before adding to a larger volume. Instant ClearJel is blended with sugar before being combined with liquid; then the fruit and any other ingredients are added. Cooking Instant ClearJel increases the thickness of the product. All these products show their maximum thickness (viscosity) upon cooling.

Canning Whole or Halved Tomatoes (USDA Complete Guide to Home Canning)

Quality: Select only disease-free, preferably vine-ripened, firm fruit for canning.

Caution: Do not can tomatoes from dead or frost-killed vines. Green tomatoes are more acidic than ripened fruit and can be canned safely with any of the following recommendations.

Acidification: To ensure safe acidity in whole, crushed, or juiced tomatoes, add 2 tablespoons of bottled lemon juice or 1/2 teaspoon of citric acid per quart of tomatoes. For pints, use 1 tablespoon bottled lemon juice or 1/4 teaspoon citric acid. Acid can be added directly to the jars before filling with product. Add sugar to offset acid taste, if desired. Four tablespoons of a 5 percent acidity vinegar per quart may be used instead of lemon juice or citric acid. However, vinegar may cause undesirable flavor changes.

When a procedure in this Guide for canning tomatoes offers both boiling water and pressure canning options, all steps in the preparation are still required even if the pressure processing option is chosen. This includes acidification.

Recommendation: Use of a pressure canner will result in higher quality and more nutritious canned tomato products. If your pressure canner cannot be operated above 15 PSI, select a process time at a lower pressure.

Procedure: Wash tomatoes. Dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water. Slip off skins and remove cores. Leave whole or halve. **Add bottled lemon juice or citric acid to the jars.** Add 1 teaspoon of salt per quart to the jars, if desired.

Fill hot jars with raw tomatoes, leaving 1/2-inch headspace. Press tomatoes in the jars until spaces between them fill with juice. Leave 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process. (Acidification is still required for the pressure canning options; follow all steps in the procedures above for any of the processing options.)

Recommended process time for Raw Whole Tomatoes Without Added Liquid in a boiling-water canner					
		Process Time at Altitudes of			
Style of Pack	Jar Size	0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Raw	Pints or Quarts	85 min	90	95	100

Canning Whole Berries (USDA Complete Guide to Home Canning)

Adding syrup to canned fruit helps to retain its flavor, color, and shape. It does not prevent spoilage of these foods. The following guidelines for preparing and using syrups offer a new "very light" syrup, which approximates the natural sugar content of many fruits. The sugar content in each of the five syrups is increased by about 10 percent. Quantities of water and sugar to make enough syrup for a canner load of pints or quarts are provided for each syrup type.

Preparing and using syrups						
		Measures of Water and Sugar				
		For 9-Pt Load*		For 7-Qt Load		
Syrup Type	Approx. % Sugar	Cups Water	Cups Sugar	Cups Water	Cups Sugar	Fruits commonly packed in syrup**
Very Light	10	6-1/2	3/4	10-1/2	1-1/4	Approximates natural sugar level in most fruits and adds the fewest calories.
Light	20	5-3/4	1-1/2	9	2-1/4	Very sweet fruit. Try a small amount the first time to see if your family likes it.
Medium	30	5-1/4	2-1/4	8-1/4	3-3/4	Sweet apples, sweet cherries, berries, grapes.
Heavy	40	5	3-1/4	7-3/4	5-1/4	Tart apples, apricots, sour cherries, gooseberries, nectarines, peaches, pears, plums.
Very Heavy	50	4-1/4	4-1/4	6-1/2	6-3/4	Very sour fruit. Try a small amount the first time to see if your family likes it.

* This amount is also adequate for a 4-quart load.

** Many fruits that are typically packed in heavy syrup are excellent and tasteful products when packed in lighter syrups. It is recommended that lighter syrups be tried, since they contain fewer calories from added sugar.

Procedure: Heat water and sugar together. Bring to a boil and pour over raw fruits in jars. For hot packs, bring water and sugar to boil, add fruit, reheat to boil, and fill into jars immediately.

Other sweeteners: Light corn syrups or mild-flavored honey may be used to replace up to half the table sugar called for in syrups.

BERRIES—WHOLE

Blackberries, blueberries, currants, dewberries, elderberries, gooseberries, huckleberries, loganberries, mulberries, raspberries.

Quantity: An average of 12 pounds is needed per canner load of 7 quarts; an average of 8 pounds is needed per canner load of 9 pints. A 24-quart crate weighs 36 pounds and yields 18 to 24 quarts—an average of 1-3/4 pounds per quart.

Quality: Choose ripe, sweet berries with uniform color.

Procedure: Wash 1 or 2 quarts of berries at a time. Drain, cap, and stem if necessary. For gooseberries, snip off heads and tails with scissors. Prepare and boil preferred syrup if desired. Add 1/2 cup syrup, juice, or water to each clean jar.

Hot pack—For blueberries, currants, elderberries, gooseberries, and huckleberries. Heat berries in boiling water for 30 seconds and drain. Fill hot jars and cover with hot juice, leaving 1/2-inch headspace.

Raw pack—Fill hot jars with any of the raw berries, shaking down gently while filling. Cover with hot syrup, juice, or water, leaving 1/2-inch headspace.

Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Berries, whole in a boiling-water canner

Style of Pack	Jar Size	Process Time at Altitudes of 0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot	Pints or Quarts	15 min	20	20	25
Raw	Pints	15	20	20	25
	Quarts	20	25	30	35

BLUEBERRY PIE FILLING

	Quantities of Ingredients Needed for: 1 Quart	7 Quarts
Fresh or thawed blueberries	*3-1/2 cups*	*6 quarts*
Granulated sugar	*3/4 cup + 2 tbsp*	*6 cups*
Clear Jel®	*1/4 cup+ 1 tbsp*	*2-1/4 cups*
Cold water	*1 cup*	*7 cups*
Bottled lemon juice	*3 tbsp*	*1/2 cup*
Blue food coloring (optional)	*3 drops*	*20 drops*
Red food coloring (optional)	*1 drop*	*7 drops*

**We will be substituting ThermFlo in this recipe*

Procedure: Wash and drain fresh blueberries. For fresh fruit, place 6 cups at a time in 1 gallon boiling water. Boil each batch 1 minute after the water returns to a boil. Drain but keep heated fruit in a covered bowl or pot.

Combine sugar and ThermFlo in a large kettle. Stir. Add water and, if desired, food coloring. Cook on medium high heat until mixture thickens and begins to bubble. Add lemon juice and boil 1 minute, stirring constantly. Fold in drained berries immediately and fill hot jars with mixture without delay, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process immediately.

Recommended process time for Blueberry Pie Filling in a boiling-water canner

		Process Time at Altitudes of			
Style of Pack	Jar Size	0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Hot	Pints or Quarts	30 min	35	40	45

CARROTS—SLICED OR DICED

Quantity: An average of 17-1/2 pounds (without tops) is needed per canner load of 7 quarts; an average of 11 pounds is needed per canner load of 9 pints. A bushel (without tops) weighs 50 pounds and yields 17 to 25 quarts—an average of 2-1/2 pounds per quart.

Quality: Select small carrots, preferably 1 to 1-1/4 inches in diameter. Larger carrots are often too fibrous.

Procedure: Wash, peel, and rewash carrots. Slice or dice. Hot pack—Cover with boiling water; bring to boil and simmer for 5 minutes. Fill hot jars, leaving 1-inch of headspace. Raw pack—Fill hot jars tightly with raw carrots, leaving 1-inch headspace.

Add 1 teaspoon of salt per quart to the jar, if desired. Add hot cooking liquid or water, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Carrots in a weighted-gauge pressure canner

			Canner Pressure (PSI) at Altitudes of	
Style of Pack	Jar Size	Process Time	0–1,000 ft	Above 1,000 ft
Hot and Raw	Pints	25 min	10 lb	15 lb
	Quarts	30	10	15

POTATOES, WHITE—CUBED OR WHOLE

Quantity: An average of 20 pounds is needed per canner load of 7 quarts; an average of 13 pounds is needed per canner load of 9 pints. A bag weighs 50 pounds and yields 18 to 22 quarts—an average of 2-1/2 to 3 pounds per quart.

Quality: Select small to medium-size mature potatoes of ideal quality for cooking. Tubers stored below 45°F may discolor when canned. Choose potatoes 1 to 2 inches in diameter if they are to be packed whole.

Procedure: Wash and peel potatoes. Place in ascorbic acid solution to prevent darkening. If desired, cut into 1/2-inch cubes. Drain. Cook 2 minutes in boiling water and drain again. For whole potatoes, boil 10 minutes and drain. Add 1 teaspoon of salt per quart to the jar, if desired. Fill hot jars with hot potatoes and fresh hot water, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for White Potatoes in a weighted-gauge pressure canner

			Canner Pressure (PSI) at Altitudes of	
Style of Pack	Jar Size	Process Time	0–1,000 ft	Above 1,000 ft
Hot	Pints	35 min	10 lb	15 lb
	Quarts	40	10	15

BEANS, SNAP AND ITALIAN—PIECES

Green and wax

Quantity: An average of 14 pounds is needed per canner load of 7 quarts; an average of 9 pounds is needed per canner load of 9 pints. A bushel weighs 30 pounds and yields 12 to 20 quarts—an average of 2 pounds per quart.

Quality: Select filled but tender, crisp pods. Remove and discard diseased and rusty pods. **Procedure:** Wash beans and trim ends. Leave whole or cut or snap into 1-inch pieces.

Hot pack—Cover with boiling water; boil 5 minutes. Fill hot jars, loosely leaving 1-inch head- space.

Raw pack—Fill hot jars tightly with raw beans, leaving 1-inch headspace.

Add 1 teaspoon of canning salt per quart to the jar, if desired. Add boiling water, leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Snap and Italian Beans in a weighted-gauge pressure canner				
			Canner Pressure (PSI) at Altitudes of	
Style of Pack	Jar Size	Process Time	0–1,000 ft	Above 1,000 ft
Hot and Raw	Pints	20 min	10 lb	15 lb
	Quarts	25	10	15

Chicken

Procedure: Choose freshly killed and dressed, healthy animals. Large chickens are more flavorful than fryers. Dressed chicken should be chilled for 6 to 12 hours before canning. Dressed rabbits should be soaked 1 hour in water containing 1 tablespoon of salt per quart, and then rinsed. Remove excess fat. Cut the chicken or rabbit into suitable sizes for canning. Can with or without bones.

Hot pack—Boil, steam, or bake meat until about two-thirds done. Add 1 teaspoon salt per quart to the jar, if desired. Fill hot jars with pieces and hot broth, leaving 1-1/4 inch head-space. Remove air bubbles and adjust headspace if needed.

Raw pack—Add 1 teaspoon salt per quart, if desired. Fill hot jars loosely with raw meat pieces, leaving 1-1/4-inch headspace. Do not add liquid.

Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Chicken or Rabbit in a weighted-gauge pressure canner				
			Canner Pressure (PSI) at Altitudes of	
Style of Pack	Jar Size	Process Time	0–1,000 ft	Above 1,000 ft
Without Bones:				
Hot and Raw	Pints	75 min	10 lb	15 lb
	Quarts	90	10	15
With Bones:				
Hot and Raw	Pints	65 min	10 lb	15 lb
	Quarts	75	10	15

STRIPS, CUBES, OR CHUNKS OF MEAT

Bear, beef, lamb, pork, veal, venison

Procedure: Choose quality chilled meat. Remove excess fat. Soak strong-flavored wild meats for 1 hour in brine water containing 1 tablespoon of salt per quart. Rinse. Remove large bones.

Hot pack—Precook meat until rare by roasting, stewing, or browning in a small amount of fat. Add 1 teaspoon of

salt per quart to the jar, if desired. Fill hot jars with pieces and add boiling broth, meat drippings, water, or tomato juice (especially with wild game), leaving 1-inch headspace. Remove air bubbles and adjust headspace if needed.

Raw pack—Add 1 teaspoon of salt per quart to the jar, if desired. Fill hot jars with raw meat pieces, leaving 1-inch headspace. Do not add liquid.

Wipe rims of jars with a dampened clean paper towel. Adjust lids and process.

Recommended process time for Strips, Cubes, or Chunks of Meat in a weighted-gauge pressure canner

			Canner Pressure (PSI) at Altitudes of	
Style of Pack	**Jar Size**	**Process Time**	**0–1,000 ft**	**Above 1,000 ft**
Hot and Raw	Pints	75 min	10 lb	15 lb
	Quarts	90	10	15