

# Canning Vegetables at Home

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Improved methods of home canning make it more enjoyable and safer for a homemaker to preserve the natural goodness of vegetables. Foods spoil because of the action of molds, yeasts and bacteria. Also, enzymes in vegetables may cause undesirable changes in flavor, color and texture. Using the proper procedures during canning, such as processing foods with a high enough heat for a long enough time, destroys the organisms and stops the action of enzymes. Airtight seals then protect foods from contamination.

## Pressure Canning

Pressure canning is essential in safely preparing low acid foods such as vegetables. Temperatures of at least 240 degrees Fahrenheit (F) must be reached when processing low-acid foods in order to destroy the spores of the dangerous *Clostridium botulinum* microorganism. They survive in low-acid foods in the absence of air, which is a condition present in canned vegetables and meats. When the spores begin to grow, they produce the deadly botulinum toxin without noticeable signs of spoilage in the sealed jar. The temperature of 240 degrees F can be reached only in a pressure canner at the appropriate pounds pressure for the altitude.

Both dial gauge and weighted gauge pressure canners are available commercially. The dial gauge canner has a gauge with a needle that indicates the pounds of pressure inside the canner. The gauges on these canners need to be checked each year to ensure accuracy. County Extension agents or the company that made the canner may be able to perform this service. For canners with a weighted gauge, the gauge does not need to be tested as long as there has been no damage

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to the gauge. It is important to keep the instruction manual that comes with any canner for reference.

## Jars and Lids

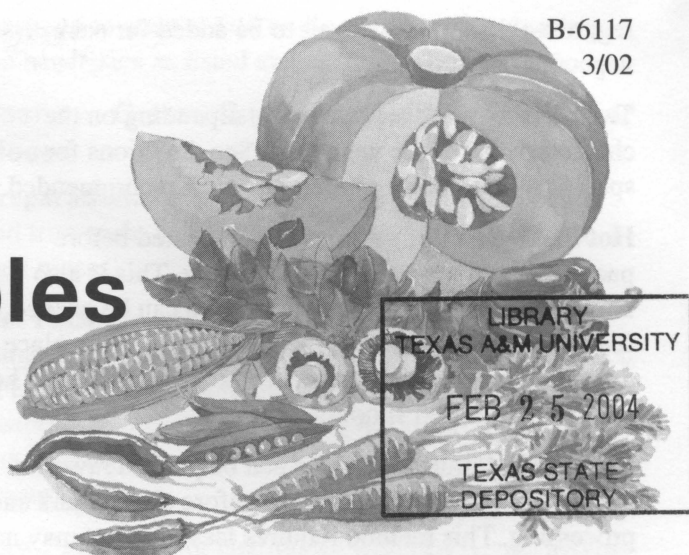
Use only standard-make jars specifically designed for home canning. Check the tops of jars for cracks, chips and dents, discarding those with defects that would prevent an airtight seal. Wash jars in hot, soapy water and rinse well. Jars do not need to be sterilized when canning in a pressure canner. However, keep the jars hot until they are filled and placed in the canner to help prevent jar breakage.

Use a two-piece, self-seal lid. It has a metal disk or lid and ring, which are self-sealing as the jar cools after processing. The top of the jar must have a smooth edge to make a seal. Although the metal disk can be used only once, the ring may be used more than one time. Lids should be treated before using according to the manufacturer's directions, which are shown on the box the lids come in.

## Vegetable Preparation, Packing and Processing Methods

Use only young, tender vegetables that are fresh and clean, and can them quickly. The sooner from the garden to the jar, the better. Sort vegetables for size, ripeness or maturity. Wash thoroughly but carefully to avoid bruising. When cutting or breaking vegetables, remember that uniformly sized vegetable pieces will be more attractive, but more importantly, will cook more evenly during processing.

Salt can be added to canned vegetable products for flavor, but is not necessary to prevent spoilage. If salt is used, canning salt is preferable to table salt to prevent liquid in jars from turning cloudy. See directions



regarding the amount of salt to be added for each vegetable.

Two types of pack may be used, depending on the characteristics of the vegetable. See directions for specific vegetables for type(s) of pack recommended.

**Hot Pack.** Some vegetables are preheated before packing into containers for processing. This is also known as precooking. Hot pack foods can be packed fairly loosely since shrinkage has already taken place during preheating. Spoon preheated vegetables into hot jars using a slotted spoon.

**Raw Pack.** Some vegetables can be packed raw into the jar and boiling liquid added before closing jars and processing. This method requires less time but may not be appropriate for all foods.

## General Directions for Processing in the Pressure Canner

1. Prepare and pack the vegetables according to instructions given for each. Use enough liquid to fill around the food in the jar and to cover the food. Remove any bubbles in the liquid by running a non-metallic spatula or knife down the sides of the jar between the food and the jar to release bubbles. Observe the amount of headspace (space between food and top of jar) recommended for each food. The right amount of headspace is important for securing a good seal and preventing foods from bubbling out of the containers during processing.
2. Wipe off the rims of the jars with a damp cloth or paper towel. Use lids pretreated according to pack-age directions. Before processing, tighten the metal ring according to the manufacturer's instructions.
3. Place the closed containers of hot food in the canner, which should contain 2 to 3 inches of hot water if you are using raw pack foods. For hot pack foods, the water can be hot or simmering. If two layers of jars are put in the canner, stagger the second layer. Use a rack between layers of glass jars.
4. Place the lid on the canner and fasten securely. If the lid is fastened by clamps, tighten opposite clamps moderately at first. Then go back over the whole set to tighten each pair as much as possible (with fingers only).
5. Turn the heat relatively high and leave the petcock or vent tube open until steam escapes steadily (called venting) for 10 minutes so that no air remains in the canner. After venting, close the petcock or put on the weighted gauge.

6. Begin counting the processing time when the pressure reaches the recommended level.
7. Keep a uniform pressure by adjusting the heat or by moving the canner carefully. Fluctuating pressure during processing may cause problems with the proper seal. Check the pressure level either by watching the dial gauge or by listening for the proper jiggling of the weight, depending on the type of canner being used. Check the manufacturer's instructions.
8. At the end of the processing time, turn off the heat and/or, if an electric range is used, remove the canner from the heat. Never release steam suddenly.
9. Allow the canner to cool until the gauge registers zero. Do not rush cooling by running cold water over the canner after processing. Let the canner cool down and depressurize naturally; wait 2 minutes more and open the petcock gradually or remove the weight. Open the canner. For personal safety, tilt the far side of the cover up so steam escapes away from you. Do not leave food sitting in an unopened canner or the food inside could begin to spoil.
10. Carefully remove jars and place right side up on a rack or towel (not on a cold surface) to avoid breakage and far enough apart to cool quickly. Do not place in a draft. After processing, do not further tighten the ring on the jar or the seal may be broken.

## Checking Jars After Processing

When the canned product is thoroughly cool, remove the metal ring, if possible, without forcing it.

If the ring sticks, cover with a hot, damp cloth for a minute or two to loosen. To test the seal, tap the lid with a spoon or fork. If the seal is good, there will be a clear ringing sound. If the seal is poor, there will be a dull thud. Press the center of the lid. If it is down and will not move when pushed, the jar is sealed.

If products are not sealed and this is discovered within 24 hours after processing, products may be saved by doing one of the following:

- Refrigerate or freeze the food and use within a reasonable time for the type of cold storage.
- Reprocess the food by removing it from unsealed jars, reheating and replacing in clean hot jars with new pretreated lids.

Reprocess it the same amount of time originally used. This may create an overprocessed product, but it should be safe if properly sealed after reprocessing.

For properly sealed processed foods, label sealed jars with contents and date. For best quality retention, store canned foods in a cool, dry place away from direct light. When properly stored, canned vegetables should retain quality for about 1 year.

When using canned products, always check for signs of spoilage before eating. A bulging lid or a leaking jar could mean spoilage. Spurting liquid, off odor, mold or floating bubbles could also be signs of spoilage. Do not eat these foods. Discard properly. It is better to be safe than sorry.

## Directions and Times for Processing Specific Vegetables

See directions for each vegetable as to the amount of time and level of pressure for safe canning. Note adjustments in pressure for higher altitudes.

### Asparagus — Spears or Pieces

**Preparation:** Wash asparagus and trim off tough scales. Leave in 4- to 6-inch spears or cut into 1-inch pieces.

**Hot Pack:** Cover asparagus with boiling water; boil 2 to 3 minutes. Fill hot jars loosely with the asparagus spears or pieces, leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling hot cooking liquid or water to jars, leaving 1 inch of headspace. Adjust lids and process.

**Raw Pack:** Pack raw asparagus tightly into hot jars, leaving 1 inch headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

### Beans — Fresh Lima, Butter, Pinto — Shelled

**Preparation:** Select well-filled pods with green seeds (beans). Shell beans and wash thoroughly.

**Hot Pack:** Cover beans with boiling water in a saucepan; bring to a boil and boil 3 minutes. Fill hot jars loosely with beans, leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling hot cooking liquid to jars, leaving 1 inch of headspace. Adjust lids and process.

**Raw Pack:** Fill hot jars with raw beans. Do not press or shake down. Small beans — leave 1 inch of headspace for pints and 1 1/2 inches for quarts. Large beans — leave 1 inch of headspace for pints and 1 1/4 inches for quarts. If desired, add 1/2 teaspoon salt to pints, 1

teaspoon to quarts. Add boiling water to jars leaving the headspace as listed above. Adjust lids and process.

### Beans — Green, Snap and Italian — Whole or Pieces

**Preparation:** Select tender, crisp pods. Wash beans and trim ends. Leave whole, snap (break) or cut into 1-inch pieces.

**Hot Pack:** Cover beans with boiling water; boil 5 minutes. Fill hot jars loosely with beans, leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling hot cooking liquid to jars, leaving 1 inch of headspace. Adjust lids and process.

**Raw Pack:** Fill hot jars tightly with raw beans, leaving 1 inch of headspace. If desired, add 1/2 teaspoon of salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

### Beets — Whole, Cubed or Sliced

**Preparation:** Beets with a diameter of 1 to 2 inches are preferred for whole packs. Beets larger than 3 inches in diameter may be fibrous or tough. Cut off beet tops, leaving an inch of stem and root to reduce loss of color. Scrub well.

**Hot Pack:** Cover beets with boiling water. Boil until skins slip off easily, about 15 to 25 minutes depending on size. Cool, remove skins and trim off stems and roots. Leave baby beets whole. Cut medium or large beets into 1/2-inch cubes or slices. Halve or quarter large slices. Fill hot jars with hot beets leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling hot water to jars, leaving 1 inch of headspace. Adjust lids and process.

### Carrots — Sliced or Diced

**Preparation:** Select small carrots, preferably 1 to 1 1/4 inches in diameter. Larger carrots are often too fibrous. Wash, peel and rewash carrots. Baby carrots can be left whole. Slice or dice other carrots.

**Hot Pack:** Cover carrots with boiling water, bring to boil, then simmer for 5 minutes. Fill hot jars with carrots, leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

**Raw Pack:** Fill hot jars tightly with raw carrots, leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

## Corn — Cream Style

**Preparation:** Select ears containing slightly immature kernels or of ideal quality for eating fresh. Husk corn, remove silk and wash ears. Blanch ears by cooking 4 minutes in boiling water. Cut corn from cob at about the center of the kernel. Scrape remaining corn pulp from cobs with a table knife.

**Hot Pack:** Add 1 cup of boiling water to each two cups of corn and scrapings in a saucepan. Heat to boiling, then simmer 3 minutes. Fill hot pint jars with hot corn mixture, leaving 1 inch of headspace. (Note: Quart jars are not recommended due to denseness of the canned product.) If desired, add 1/2 teaspoon salt to pint jars. Adjust lids and process.

## Corn — Whole Kernel

**Preparation:** Select ears containing slightly immature kernels of ideal quality for eating fresh. Canning of some sweeter varieties or kernels that are too immature may cause browning. If unsure of the suitability of a variety for canning, can a small amount, then check the color and flavor before canning large quantities. Husk corn, remove silk and wash ears. Blanch 3 minutes in boiling water. Cut corn from cob at about three-fourths the depth of kernel. (For whole kernel corn, do not scrape cob.)

**Hot Pack:** Add 1 cup of hot water to each 4 cups of kernels in a saucepan; heat to boiling and simmer 5 minutes. Fill hot jars with corn leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling hot cooking liquid or boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

**Raw Pack:** Fill hot jars with raw kernels, leaving 1 inch headspace. Do not shake or press down. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

## Mixed Vegetables

**Suggested Mix:** Equal portions (about 6 cups each) of sliced carrots, whole-kernel sweet corn, cut green beans, shelled lima beans, crushed tomatoes, cubed zucchini.

**Optional Mix:** You may substitute other favorite vegetables except dried beans, leafy greens, cream style corn, summer or winter squash and sweet potatoes.

**Preparation:** Except for zucchini, wash and prepare vegetables as for canning. Wash, trim and cube zucchini if used.

**Hot Pack:** Combine all vegetables in a large pot or kettle and add enough boiling water to cover pieces. Bring mixture back to a boil and boil for 5 minutes. Fill hot jars with hot vegetable pieces. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

## Okra — Whole or Pieces

**Preparation:** Select young, tender pods. Wash pods and trim ends. Leave whole or cut into 1-inch pieces.

**Hot Pack:** Cover okra with hot water in a saucepan. Boil 2 minutes and drain. Fill hot jars with hot okra, leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

## Peas — Blackeye, Crowder or Field

**Preparation:** Shell and wash peas.

**Hot Pack:** Cover peas with boiling water and boil for 3 minutes. Pack peas loosely into hot jars, leaving 1 inch of headspace for pints, 1 1/2 inches for quarts. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling cooking liquid to jars, leaving the headspace listed above. Adjust lids and process.

**Raw Pack:** Pack raw peas loosely into hot jars, leaving 1 inch of headspace for pints and 1 1/2 inches for quarts. Do not shake or press down peas. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving the headspace listed above. Adjust lids and process.

## Peas — Green or English — Shelled

(It is recommended that sugar snap and Chinese edible pods be frozen for best quality.)

**Preparation:** Shell and wash peas.

**Hot Pack:** Cover peas with boiling water and boil for 2 minutes. Pack hot peas loosely into hot jars, leaving 1 inch of headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling hot cooking liquid to jars, leaving 1 inch of headspace. Adjust lids and process.

**Raw Pack:** Fill hot jars with raw peas. Do not shake or press down peas. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

**Peppers** (See L-5309, "Preserving Peppers," available from Texas Cooperative Extension)

### **Potatoes, Sweet — Pieces or Whole**

**Preparation:** Choose small to medium-size potatoes. They should be mature, but not too fibrous. Can within 1 to 2 months after harvest.

**Hot Pack:** Wash potatoes and boil or steam until partially soft (15 to 20 minutes). Allow to cool only enough to handle to remove skins. Cut medium potatoes, if needed, so that pieces are uniform in size. (*Caution: Do not mash or puree pieces.*) Pack potatoes into hot jars, leaving a 1-inch headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water or boiling sugar syrup to jars. (Sugar syrup may be made from 1 to 1 1/4 cups sugar and 4 cups water.) When filling jars with liquid, leave 1 inch of headspace. Adjust lids and process.

### **Potatoes, White — Cubed or Whole**

**Preparation:** Select small to medium-size mature potatoes. Tubers stored below 45 degrees F may discolor when canned. Choose potatoes 1 to 2 inches in diameter if they are to be packed whole. Wash and peel potatoes. If desired, cut into 1/2-inch cubes. Place in ascorbic acid solution (1 teaspoon or 3000 milligrams of ascorbic acid to 1 gallon water) to prevent darkening while preparing. Drain.

**Hot Pack:** For cubed potatoes, cook 2 minutes in boiling water and drain again. For whole potatoes, boil 10 minutes and drain. Pack hot potatoes into hot jars, leaving a 1-inch headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Add boiling water to jars, leaving 1 inch of headspace. Adjust lids and process.

### **Pumpkins and Winter Squash — Cubed**

**Preparation:** Pumpkins and squash should have a hard rind and stringless, mature pulp of ideal quality for cooking. Small size pumpkins (sugar or pie varieties) make better products. Wash, remove seeds, cut into 1 inch-wide slices and peel. Cut flesh into 1-inch cubes.

**Hot Pack:** Boil pumpkin pieces 2 minutes in water. (*Caution: Do not mash or puree.*) Pack cubes into hot jars, leaving 1 inch headspace. Add boiling hot cooking liquid to jars, leaving a 1-inch headspace. Adjust lids and process.

### **Spinach and Other Greens (Turnip, Mustard)**

**Preparation:** Can only freshly harvested greens. Wash only small amounts of greens at one time. Drain water

and continue rinsing until water is clear and free of grit. Cut out tough stems and midribs.

**Hot Pack:** Blanch 1 pound of greens at a time in a cheesecloth bag or blancher basket and steam 3 to 5 minutes or until well wilted. Fill hot jars loosely with hot greens, leaving 1 inch of headspace. If desired, add 1/4 teaspoon salt to pints, 1/2 teaspoon to quarts. Add boiling water to jars, leaving a 1-inch headspace. Adjust lids and process.

### **Soups — Vegetable**

**Preparation:** Select, wash, and prepare vegetables as you would for hot pack canning. Cooked, boned meat or poultry pieces with the fat removed can also be added if desired. If using dried beans or peas, rehydrate first. Combine ingredients with enough hot water or broth from cooking meat, poultry or tomatoes to cover. Boil 5 minutes. (*Caution: Do not thicken or add milk or cream.*) Salt to taste, if desired. Fill jars halfway with solid mixture. Continue filling with hot boiling liquid, leaving 1 inch of headspace. Adjust lids and process.

### **Squash, Winter — Cubed (See Pumpkins)**

#### **Tomatoes — Crushed**

(Many tomato products may also be processed using the boiling water canner for lengthy periods of processing time. See L-2216, "Home Canning Fruits and Tomatoes," by Texas Cooperative Extension.

**Preparation:** Wash tomatoes and dip in boiling water for 30 seconds or until skins split. Dip in cold water, slip off skins and remove cores. Trim off any bruised or discolored portions and quarter.

**Hot Pack:** Heat about one-sixth of the quarters quickly in a large pot, crushing them as they are added to the pot to draw off some juice. Continue heating, stirring the mixture to prevent burning.

When mixture is boiling, gradually add remaining quartered tomatoes, stirring constantly but not crushing them as they will soften with heating and stirring. When all tomatoes are added, boil gently for 5 minutes. Add bottled lemon juice or citric acid to hot jars in the amount of 1 tablespoon bottled lemon juice or 1/4 teaspoon citric acid for pints; double the amount for quarts. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Fill jars with hot tomatoes, leaving 1/2 inch of headspace. Adjust lids and process.

## Processing Time in Dial Gauge Pressure Canner

Vegetable	Style of Pack	Jar Process	Process Time	Canner Pressure at Altitudes of			
				0-2,000 ft.	2001-4,000 ft.	4001-6,000 ft.	6,001-8,000 ft.
Asparagus, spears or pieces	Hot & Raw	Pints	30 min.	11	12	13	14
		Quarts	40 min.	11	12	13	14
Beans, fresh, shelled Lima, butter, pinto	Hot & Raw	Pints	40 min.	11	12	13	14
		Quarts	50 min.	11	12	13	14
Beans, green, snap & Italian, whole or pieces	Hot & Raw	Pints	20 min.	11	12	13	14
		Quarts	25 min.	11	12	13	14
Beets, whole, cubed, or sliced	Hot	Pints	30 min.	11	12	13	14
		Quarts	35 min.	11	12	13	14
Carrots, sliced or diced	Hot & Raw	Pints	25 min.	11	12	13	14
		Quarts	30 min.	11	12	13	14
Corn, cream style	Hot	Pints	85 min.	11	12	13	14
Corn, whole kernel	Hot & Raw	Pints	55 min.	11	12	13	14
		Quarts	85 min.	11	12	13	14
Mixed vegetables	Hot	Pints	75 min.	11	12	13	14
		Quarts	90 min.	11	12	13	14
Okra	Hot	Pints	25 min.	11	12	13	14
		Quarts	40 min.	11	12	13	14
Peas, Blackeye, Crowder, Field	Hot & Raw	Pints	40 min.	11	12	13	14
		Quarts	50 min.	11	12	13	14
Peas, Green or English, shelled	Hot & Raw	Pints & Quarts	40 min.	11	12	13	14
Potatoes, Sweet, pieces or whole	Hot	Pints	65 min.	11	12	13	14
		Quarts	90 min.	11	12	13	14
Potatoes, White cubed or whole	Hot	Pints	35 min.	11	12	13	14
		Quarts	40 min.	11	12	13	14
Pumpkin & Winter Squash, cubed	Hot	Pints	55 min.	11	12	13	14
		Quarts	90 min.	11	12	13	14
Spinach & other greens (turnip, mustard)	Hot	Pints	70 min.	11	12	13	14
		Quarts	90 min.	11	12	13	14
Soups-vegetable	Hot	Pints	60 min.*	11	12	13	14
		Quarts	75 min.*	11	12	13	14
<b>*CAUTION: Process 100 minutes if soup contains seafoods.</b>							
Tomatoes, crushed	Hot	Pints	15 min.	11	12	13	14
		Quarts	15 min.	11	12	13	14
Tomatoes, stewed	Hot	Pints	15 min.	11	12	13	14
		Quarts	20 min.	11	12	13	14
Tomatoes with Okra or Zucchini	Hot	Pints	30 min.	11	12	13	14
		Quarts	35 min.	11	12	13	14

## Processing Time in a Weighted Gauge Pressure Canner

Vegetable	Style of Pack	Jar Size	Process Time	Canner Pressure at Altitudes of	
				0-1,000 ft.	Above 1,000 ft.
Asparagus, spears or pieces	Hot	Pints	30 min.	10 lb.	15 lb.
	Raw	Quarts	40 min.	10 lb.	15 lb.
Beans, fresh, shelled Lima, butter, pinto	Hot &	Pints	40 min.	10 lb.	15 lb.
	Raw	Quarts	50 min.	10 lb.	15 lb.
Beans, green, snap & Italian, whole or pieces	Hot &	Pints	20 min.	10 lb.	15 lb.
	Raw	Quarts	25 min.	10 lb.	15 lb.
Beets, whole, cubed, or sliced	Hot	Pints	30 min.	10 lb.	15 lb.
		Quarts	35 min.	10 lb.	15 lb.
Carrots, sliced or diced	Hot &	Pints	25 min.	10 lb.	15 lb.
	Raw	Quarts	30 min.	10 lb.	15 lb.
Corn, cream style	Hot	Pints	85 min.	10 lb.	15 lb.
Corn, whole kernel	Hot &	Pints	55 min.	10 lb.	15 lb.
	Raw	Quarts	85 min.	10 lb.	15 lb.
Mixed vegetables	Hot	Pints	75 min.	10 lb.	15 lb.
		Quarts	90 min.	10 lb.	15 lb.
Okra	Hot	Pints	25 min.	10 lb.	15 lb.
		Quarts	40 min.	10 lb.	15 lb.
Peas, Blackeye, Crowder, Field	Hot &	Pints	40 min.	10 lb.	15 lb.
	Raw	Quarts	50 min.	10 lb.	15 lb.
Peas, Green or English, shelled	Hot & Raw	Pints & Quarts	40 min.	10 lb.	15 lb.
Potatoes, Sweet, pieces or whole	Hot	Pints	65 min.	10 lb.	15 lb.
		Quarts	90 min.	10 lb.	15 lb.
Potatoes, White, cubed or whole	Hot	Pints	35 min.	10 lb.	15 lb.
		Quarts	40 min.	10 lb.	15 lb.
Pumpkin & Winter Squash, cubed	Hot	Pints	55 min.	10 lb.	15 lb.
		Quarts	90 min.	10 lb.	15 lb.
Spinach & other greens (turnip, mustard)	Hot	Pints	70 min.	10 lb.	15 lb.
		Quarts	90 min.	10 lb.	15 lb.
Soups-vegetable	Hot	Pints	60 min.*	10 lb.	15 lb.
		Quarts	75 min.*	10 lb.	15 lb.
<b>*CAUTION: Process 100 minutes if soup contains seafoods.</b>					
Tomatoes, crushed	Hot	Pints	15 min.	10 lb.	15 lb.
		Quarts	15 min.	10 lb.	15 lb.
Tomatoes, stewed	Hot	Pints	15 min.	10 lb.	15 lb.
		Quarts	20 min.	10 lb.	15 lb.
Tomatoes with Okra or Zucchini	Hot	Pints	30 min.	10 lb.	15 lb.
		Quarts	35 min.	10 lb.	15 lb.

## **Tomatoes — Stewed with pepper & onion (*must be pressure canned due to low acid content of added vegetables*)**

**Recipe:** 2 quarts chopped tomatoes, 1/4 cup chopped green peppers, 1/4 cup chopped onions, 2 teaspoons celery salt, 2 teaspoons sugar, 1/4 teaspoon salt

**Hot Pack:** Combine all ingredients. Cover and cook 10 minutes, stirring as necessary to prevent sticking. Pour hot mixture into hot jars, leaving 1/2 inch of headspace. Adjust lids and process.

## **Tomatoes With Okra or Zucchini**

**Preparation:** Wash tomatoes and okra or zucchini. Dip tomatoes in boiling water 30 to 60 seconds until skins split. Then dip in cold water, slipping off skins and removing cores. Quarter tomatoes. If using okra, trim stems and slice into 1-inch pieces or leave whole. If using zucchini, slice or cube.

**Hot Pack:** Bring tomatoes to boil in a pot and simmer, stirring to prevent burning. Some juice should form.

Simmer 10 minutes. Add okra or zucchini and boil gently 5 more minutes. If desired, add 1/2 teaspoon salt to each pint jar, 1 teaspoon to each quart. Fill hot jars with hot mixture, leaving a 1-inch headspace. Adjust lids and process. (*Note: this mixture must be processed with a pressure canner because the mixture contains low acid vegetables.*)

## **Tomato-Vegetable Mixtures**

Unless a specific tested recipe is available, such as the two above, any tomato-vegetable mixture must be processed in a pressure canner according to directions for the vegetable that has the longest processing time. This is because most vegetables are low acid foods.

**Caution:** *To prevent the risk of botulism, low-acid foods (vegetables, meats, poultry and seafood) not canned according to the recommendations in this publication should be boiled even if you detect no signs of spoilage. Boil foods for 10 minutes at altitudes below 1, 000 feet. Add an additional minute of boiling time for each additional 1, 000 feet of elevation.*

## **References**

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