



What CAN we do... ?

Food Preservation & Home Kitchen Approaches



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FOOD ACCESS PROGRAM

Food Is Medicine




- ❖ Healthy Navajo Stores Initiative (HNSI)
- ❖ Navajo FVRx Fruit & Vegetable Prescription Program
- ❖ Growers' Initiative
 - Farm to School/ECE
 - "Grow the Growers"

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https://nchfp.uga.edu/how/general/ensuring_safe_canned_foods.html



How do I? ...General Information

General Canning Information

Ensuring Safe Canned Foods

Growth of the bacterium *Clostridium botulinum* in canned food may cause botulism—a deadly form of food poisoning. These bacteria exist either as spores or as vegetative cells. The spores, which are comparable to plant seeds, can survive harmlessly in soil and water for many years. When ideal conditions exist for growth, the spores produce vegetative cells which multiply rapidly and may produce a deadly toxin within 3 to 4 days of growth in an environment consisting of:

- a moist, low-acid food
- a temperature between 40° and 120°F
- less than 2% oxygen

Botulinum spores are on most fresh food surfaces. Because they grow only in the absence of air, they are harmless on fresh foods.

Most bacteria, yeasts, and molds are difficult to remove from food surfaces. Washing fresh food reduces their numbers only slightly. Peeling root crops, underground stem crops, and tomatoes reduces their numbers greatly. Blanching also helps, but the vital controls are the method of canning and making sure the recommended research-based process times found in the USDA's *Complete Guide to Home Canning* are used.

The processing times in this book ensure destruction of the largest expected number of heat-resistant microorganisms in home-canned foods. Properly sterilized canned food will be free of spoilage if lids seal and jars are stored below 95°F. Storing jars at 50° to 70°F enhances retention of quality.

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KNOWING THE pH LEVEL

of your favorite fruits and veggies

STRONG ACID

HIGH-ACID FOODS
Process at 212° F in a Water Bath Canner

1. LEMONS
2. PICKLES
3. APPLES
4. PEACHES

SOUP CHERRIES
PEARS
TOMATOES

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You can ADJUST the acidity of your recipe if needed...

Bottled lemon (or lime) juice has been uniformly acidified so that it has a consistent and dependable acid level. When you're canning things like tomatoes (or watermelon jelly) and you need to reliably get those foods into a safe pH zone, that consistency is important.

With bottled lemon or lime juice, look for 5% acidity (if you can find it on the label) and minimal additives. One tablespoon of bottled lemon juice is equal to 1/4 teaspoon of citric acid. This means that if a recipe instructs you to add 2 tablespoons of bottled lemon juice to each quart jar before canning, you can easily swap in 1/2 teaspoon of citric acid.

One tablespoon bottled lemon juice = 1/4 teaspoon citric acid

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KNOWING THE pH LEVEL

of your favorite fruits and veggies

PRESSURE COOKERS
are not the same thing as
PRESSURE CANNERS

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INDUCTION

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Process adjustments at high altitudes

Using the process time for canning food at sea level may result in spoilage if you live at altitudes of 1,000 feet or more.

Water boils at lower temperatures as altitude increases. Lower boiling temperatures are less effective for killing bacteria. Increasing the process time or canner pressure compensates for lower boiling temperatures.

Therefore, when you use the Complete Guide to Home Canning, select the proper processing time or canner pressure for the altitude where you live.

Adapted from the "Complete Guide to Home Canning," Agriculture Information Bulletin No. 539, NIFA-USDA (Revised 2015). Page published February 2, 2017.

https://nchfp.uga.edu/how/general/ensuring_safe_canned_foods.html

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11,000 ft - 98°F
8,000 ft - 97°F
6,000 ft - 95°F
4,000 ft - 92°F
2,000 ft - 90°F
Sea Level - 89°F

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https://nchfp.uga.edu/how/can_02/applesauce.html **How do I? ... Can Fruits**

Selecting, Preparing and Canning Fruit

Applesauce

QUANTITY
An average of 21 pounds is needed per canner load of 7 quarts; an average of 13½ pounds is needed per canner load of 9 pints. A bushel weighs 48 pounds and yields 14 to 19 quarts of sauce – an average of 3 pounds per quart.

QUALITY
Select apples that are sweet, juicy and crisp. For a tart flavor, add 1 to 2 pounds of tart apples to each 3 pounds of sweeter fruit.

PROCEDURE
Wash, peel, and core apples. If desired, slice apples into water containing ascorbic acid to prevent browning. Placed drained slices in an 8- to 10-quart pot. Add ½ cup water. Stirring occasionally to prevent burning, heat quickly until tender (5 to 20 minutes, depending on maturity and variety). Press through a sieve or food mill, or skip the pressing step if you prefer chunk-style sauce.


Sauce may be packed without sugar. If desired, add 1½ cup sugar per quart of sauce. Taste and add more, if preferred. Reheat sauce to boiling. Fill jars with hot sauce, leaving ½-inch headspace. Adjust lids and process.

Style of Pack	Quart Size	Process Time at Altitudes of		
		0 - 1,000 ft	1,001 - 3,000 ft	Above 3,000 ft
Hot	Pints	15 min	20	25
	Quarts	20	25	30

TIMING is based on ELEVATION

This document was adapted from the "Complete Guide to Home Canning," Agriculture Information Bulletin No. 539, USDA, revised 2015. Reviewed February 2018. 11/10/22

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https://nchfp.uga.edu/how/can_07/peach_jam_powder.html **How do I? ... Make Jam & Jelly**

Making Jams and Jellies

Peach Jam with powdered pectin


- 3½ cups crushed peaches (about 3 pounds peaches)
- ¼ cup lemon juice
- 1 package powdered pectin
- 5 cups sugar

Yield: About 6 half-pint jars

Please read [Using Boiling-Water Canners](#) before beginning. If this is your first time canning, it is recommended that you read [Principles of Home Canning](#).

PROCEDURE
Sterilize canning jars and prepare two-piece canning lids according to manufacturer's directions.
To prepare fruit. Sort and wash fully ripe peaches. Remove stems, skins and pits. Crush peaches.
To make jam. Measure crushed peaches into a kettle. Add lemon juice and pectin; stir well. Place on high heat and, stirring constantly, bring quickly to a full boil with bubbles over the entire surface. Add sugar, continue stirring, and heat again to a full bubbling boil. Boil hard for 1 minute, stirring constantly. Remove from heat, skim.
Fill hot jam immediately into hot, sterile jars, leaving ½ inch headspace. Wipe rims of jars with a dampened clean paper towel; adjust two-piece metal lids. **Process in a Boiling Water Canner.**

Style of Pack	Jar Size	Process Time at Altitudes of		
		0 - 1,000 ft	1,001 - 6,000 ft	Above 6,000 ft
Hot	Half-pints or Pints	5 min	10	15



This document was adapted from "How to Make Jellies, Jams and Preserves at Home," Home and Garden Bulletin No. 56, Extension Service, United States Department of Agriculture, 1982 reprint, National Center for Home Food Preservation, June 2005.

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<https://pomonapectin.com/peach-jam/>

Peaches (as a low-sugar or low-honey jam made with Pomona's Universal Pectin). This is the same recipe you'll find on the domestic and export sites that contain 40% for pectin. Pomona's Pectin contains no sugar or preservatives and sets reliably with low amounts of any sweetener.

Ingredients
4 cups peaches (about 3 pounds) mashed or peeled + mashed
4 teaspoons calcium water
¼ cup lemon juice bottled
½ cup up to 1 cup honey **OR** ½ cup up to 2 cups sugar
3 teaspoons Pomona's Pectin powder mixed with sweetener

BEFORE YOU BEGIN, prepare calcium water.
To do this, combine ½ teaspoon calcium powder (in the small packet in your box of Pomona's pectin) with ½ cup water in a small, clear jar with a lid. **Shake well.**
Extra calcium water should be stored in the refrigerator for future use.

Instructions
Wash jars, lids, and bands. Place jars in canner, fill canner 2/3 full with water, bring to a boil. Turn off heat, cover, and keep jars in hot canner water until ready to use. Place lids in water in a small saucepan; cover and heat to a low boil. Turn off heat and keep lids in hot water until ready to use.
Pit, chop, and mash or peel, pit, and mash peaches. Measure fruit into saucepan. Add calcium water and lemon juice and mix well.
Measure sugar or room temperature honey into a bowl. Thoroughly mix pectin powder into sweetener. Set aside.
Bring fruit mixture to a full boil. Add pectin-sweetener mixture, stirring vigorously for 1 to 2 minutes to dissolve the pectin while the jam comes back up to a boil. Once the jam returns to a full boil, remove it from the heat.
Fill hot jars to ½" of top. Wipe rims clean. Screw on 2-piece lids. Put filled jars in boiling water to cover. Boil 10 minutes (add 1 minute more for every 1,000 ft. above sea level). Remove from water. Let jars cool. Check seals; lids should be sucked down.
Eat within 1 year. Lasts 3 weeks once opened.



Peaches/Jam: Photo 188200578 © Sheila Fitzgerald | Dreamstime.com

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Canning



Canning Timer & Checklist App

Joanne Brandt

Select from over 50 popular foods used in home canning—including vegetables, fruits, meats, jams, jellies, pickles, and seafood—to generate a checklist and timer for processing. This app lets you set your jar size, pack type, canning method, and elevation. It also reminds you of the steps necessary to prepare jars and canning pots. The timer is based on the specific information you enter. Designed for people with previous canning experience.

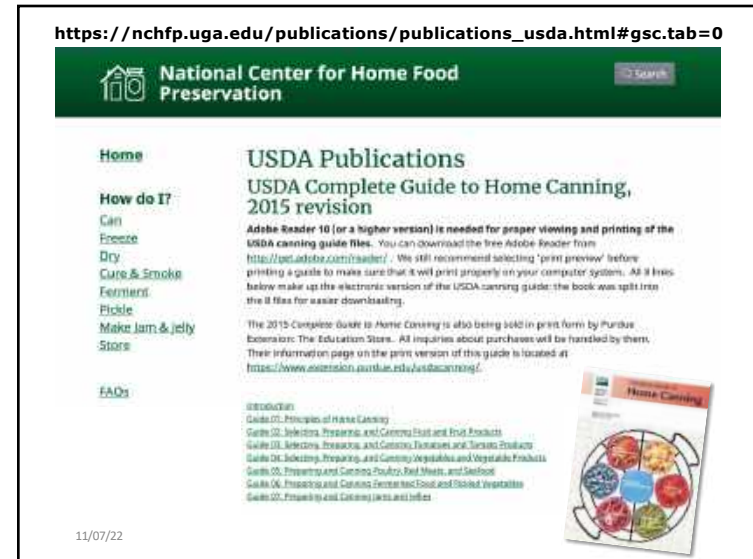
Download the free Canning Timer and Checklist app:

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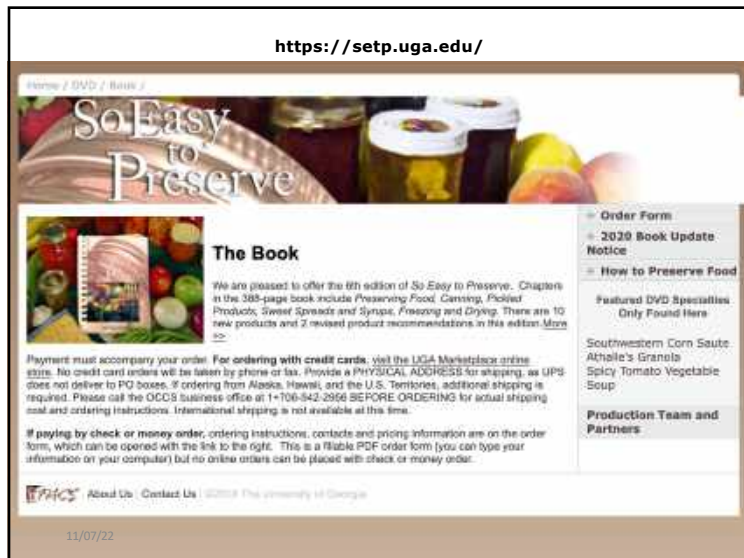
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