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University of California
Agriculture and Natural Resources

UCCE Master Food Preserver Program
Sacramento County

*Sacramento County Master Food Preservers
Monthly Wednesday Night Demonstration
July 21, 2021
Stone Fruit*



Resources:

- Please visit the National Center for Home Food Preservation at <http://nchfp.uga.edu> for detailed information about research-based methods of home food preservation.
- UC ANR Catalog (<http://anrcatalog.ucanr.edu>)

Should you need assistance or require special accommodations for any of our educational programs, please contact us at 916-875-6913.

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FACTS ABOUT WHITE PEACH *CAUTION*

Source: [National Center for Home Food Preservation | How Do I? Can Fruits \(uga.edu\)](https://nchfp.uga.edu/how/01/canfruits.html)

There is evidence that some varieties of white-flesh peaches are higher in pH (i.e., lower in acid) than traditional yellow varieties. The natural pH of some white peaches can exceed 4.6, making them a low-acid food for canning purposes. At this time there is no low-acid pressure process available for white-flesh peaches nor a researched acidification procedure for safe boiling water canning.

Freezing is the recommended method of preserving white-flesh peaches.

PLUM SAUCE

Source: Ball, Complete Book of Home Preserving

Makes about four-pint jars

2 cups lightly packed brown sugar

1 cup granulated sugar

1 cup cider vinegar

3/4 cup finely chopped onion

2 tbsp finely seeded green chili pepper, such as Anaheim, New Mexico green chili, poblano or jalapeno

2 tbsp mustard seed

1 tbsp salt

2 cloves garlic, finely chopped

1 tbsp finely chopped gingerroot

10 cups finely chopped pitted plums

1. In a large stainless-steel saucepan combine brown sugar, granulated sugar, vinegar, onion, chili pepper, mustard seed, salt, garlic and gingerroot. Bring to a boil over high heat, stirring constantly. Add plus and return to a boil. Reduce heat and boil gently, stirring occasionally, until thick and syrupy, about 1 3/4 hours.
2. Meanwhile, prepare canner, jars and lids.
3. Ladle hot sauces into hot jars, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot sauce. Wipe rim. Center lid on jar. Screw band down until resistance is met, then increase to fingertip-tight.
4. Place jars in canner, ensuring they are completely covered with water. Bring to a boil and process for 20 minutes. Remove canner lid. Wait 5 minutes, then remove jars, cool and store.

TIPS

The kind of chili pepper you use will determine the degree of heat in your sauce. Of those suggested, jalapeno is the hottest, so if you prefer a spicier sauce, use it when this recipe. Or you can use 1 tbsp chopped jalapeno and 1 tbsp chopped Anaheim, New Mexico or poblano for a bit more zest than you would achieve using any of the others.

The best way to seed peppers is to trim off the stem end and then cut the pepper in half lengthwise. Scrape out the seeds and veins, using a spoon. Remember, when cutting or seeding hot peppers, wear rubber gloves to keep your hands from being burned.

PEACH PIE FILLING

Source: [National Center for Home Food Preservation | How Do I? Can Fruits \(uga.edu\)](https://nchfp.uga.edu/how/01/canfruits.html)

Quality: Select ripe, but firm fresh peaches. Red Haven, Redskin, Sun High, and other varieties of similar quality are suitable.

Yield: 1 quart or 7 quarts.

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: See [Table 1](#) for suggested quantities. Peel peaches. To loosen skins, submerge peaches in boiling water for approximately 30-60 seconds, and then place in cold water for 20 seconds. Slip off skins and prepare slices 1/2-inch thick. Place slices in water containing 1/2 tsp. of ascorbic acid crystals or six 500-milligram vitamin C tablets in 1 gallon of water to prevent browning.

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 water, sugar, Clear Jel®, and, if desired, cinnamon and/or almond extract in a large kettle. Stir and cook over medium high heat until mixture thickens and begins to bubble. Add lemon juice and boil sauce 1 minute more, stirring constantly. Fold in drained peach slices and continue to heat mixture for 3 minutes. Fill jars without delay, leaving 1-inch head-space. Adjust lids and process immediately according to the recommendations in [Table 2](#).

Table 1. Peach Pie Filling

	Quantities of Ingredients Needed For	
	1 Quart	7 Quarts
Sliced fresh peaches	3-1/2 cups	6 quarts
Granulated sugar	1 cup	7 cups
Clear Jel®	1/4 cup + 1 tbsp	2 cups + 3 tbsp
Cold water	3/4 cup	5-1/4 cups
Cinnamon (optional)	1/8 tsp	1 tsp
Almond extract (optional)	1/8 tsp	1 tsp
Bottled lemon juice	1/4 cup	1-3/4 cups

Table 2. Recommended process time for **Peach 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

This document was adapted from the "Complete Guide to Home Canning," Agriculture Information Bulletin No. 539, USDA, revised 2015.

PEACH PICKLES

Source: Ball Blue Book, Guide to Preserving 2014 [Edition 37]

Yield: about 3 quart jars

8 pounds small peaches (about 40 to 48 small)	2 tablespoons whole cloves
Ball Fruit-Fresh Produce Protector	1 tablespoon grated fresh ginger
4 sticks cinnamon	6 cups sugar
1 quart vinegar, 5% acidity	

PREP Wash peaches under cold running water; drain. To peel peaches, blanch 30 to 60 seconds in boiling water. Immediately transfer to cold water. Cut off peel. Treat with Fruit-Fresh to prevent darkening. Tie spices in spice bag.

COOK Combine spice bag, sugar, and vinegar in a large saucepan. Bring mixture to a boil over medium-heat; boil 5 minutes. Reduce heat medium. Drain peaches. Gently boil peaches in syrup until they give slightly when pierced with a fork. Remove from heat. Cover; let stand 12 to 24 hours in refrigerator. Bring peaches to a simmer and cook until hot throughout. Remove spice bag.

FILL Pack peaches into a hot jar, leaving ½-inch headspace. Ladle syrup over peaches, leaving ½-inch headspace. Remove air bubbles. Clean jar rim. Center lid on jar and adjust band to fingertip-tip tight. Place jar on the rack elevated over simmering water (180°F) in boiling-water canner. Repeat until all jars are filled.

PROCESS Lower the rack into simmering water. Water must cover jars by 1-inch. Adjust heat to medium-high, cover canner and bring water to rolling boil. Process quart jars 20 minutes. Turn off heat and remove cover. Let jars cool 5 minutes. Remove jars from canner, do not retighten bands if loose. Cool 12 hours. Check seal. Label and store jars.

BALL FORMULAS for JAMS MADE EASY

Source: Ball pectin bottle label(s)

Follow these simple steps to delicious jam.

Visit FreshPreserving.com for a recipe calculator to customize the number from 2 to 10.

TRADITIONAL JAM and REDUCED SUGAR JAM

For every 2 (8 oz.) half pints of jam, you will need:	Traditional Jam	Reduced Sugar Jam
Prepared fruit (see table)	1-1/3 cups	1-1/3 cups
Bottled lemon juice, use only with blueberries, peaches and sweet cherries	3 tsp	3 tsp
Ball® Classic® Pectin	1-1/2 Tbsp	1-1/2 Tbsp
Granulated Sugar	1-2/3 cups	1 cup

To Prepare Fruit:	
Strawberry	Hull and crush one layer at a time using a potato masher.
Peaches or Pears	Feel and pit. Finely chop.
Raspberry, Blackberry or Blueberry	Crush one layer at a time using a potato masher.
Cherries	Remove stems and pits. Finely chop.

NO-SUGAR NEEDED JAM and LOW SUGAR JAM

For every 2 (8 oz.) half pints of jam, you will need:	No-Sugar Needed Jam	Low Sugar Jam
Prepared fruit (see table)	2 cups	1-1/3 cups
Unsweetened fruit juice, thawed fruit juice concentrate or water	1/3 cup	1/3 cup
Bottled lemon juice, use only with blueberries, peaches and sweet cherries	3 tsp	3 tsp
Ball® RealFruit® Low or No-Sugar Needed Pectin	1-1/2 Tbsp	1-1/2 Tbsp
Granulated sugar, sugar substitute or honey	None	Up to 1/2 cup

To Prepare Fruit:	
Strawberry	Hull and crush one layer at a time using a potato masher.
Peaches or Pears	Feel and pit. Finely chop.
Raspberry, Blackberry or Blueberry	Crush one layer at a time using a potato masher.
Cherries	Remove stems and pits. Finely chop.

FRUIT SPREADS: Problems and Solutions

Source: Fundamentals of Consumer Food Safety and Preservation, Master Handbook

Problem	Cause	Prevention
<p>Mold growth or fermentation. Moldy jams and jellies are not safe to eat. They should be discarded.</p>	1. Failure to process in boiling water canner, allowing yeasts and mold to grow on jam or jelly.	1. Process in boiling water canner. Test seal before storing. Pre-sterilize jars when processed less than 10 minutes in boiling water canner.
	2. Imperfect sealing. (Common with paraffin-covered products and inversion method for settling.	2. Use new flat lids for each jar and pre-treat the lids per manufacturer's directions. Process in boiling water canner. Test seal before storing.
	3. Too little sugar.	3. Follow processing and storage recommendations for low-sugar jellied products.
	4. Improper storage.	4. Store processed jars in a dark, dry, cool place. Refrigerate after opening.
<p>Too soft or runny. Product is safe to eat.</p>	1. Overcooking fruit to extract juice.	1. Avoid overcooking, as this lowers the jelling capacity of pectin.
	2. Using too much water to extract juice.	2. Use only the amount of water suggested in the instructions.
	3. Incorrect proportions of sugar and juice.	3. Follow recommended proportions.
	4. Undercooking causing insufficient concentrate of sugar.	4. Cook rapidly to jelling point.
	5. Insufficient acid.	5. Lemon juice is sometimes added if the juice is acid deficient.
	6. Making too large a batch at one time.	6. Use only four to six cups of juice in each batch of jelly.
	7. Moving product too soon.	7. Do not move jellied products for at least 12 hours after they are made.
	8. Insufficient time before using.	8. Some fruits take up to two weeks to set up completely; apricot jam, plum jelly and jellies or jams made from bottled juices may take longer to set.
<p>Fruit floats in jam.</p>	1. Under rip fruit.	1. Use ripe fruit.

Products are safe to eat.	2. Not thoroughly crushed.	2. Crush fruit uniformly.
	3. Undercooking.	3. Cook rapidly, following instructions.
Bubbles. Safe to eat unless bubbles are moving or product is spoiled.	1. Air became trapped in hot jelly	1. Remove foam from jelly or jam before filling jars. Ladle or pour quickly into jar. Do not allow spread to start to gelling before jars are filled.
	2. May denote spoilage. If bubbles are moving, do not use.	2. Follow recommended methods for applying lids and processing.
Formation of crystals. Product is safe to eat.	1. Excess sugar.	1. Use a tested recipe and measure ingredients precisely.
	2. Undissolved sugar sticking to sides of saucepan.	2. Dissolve all sugar as jelled cooks. If necessary, wipe sides of pan free of crystals with damp cloth before filling jars.
	3. Tartrate crystals in grape juice.	3. Extract grape juice and allow tartrate crystals to settle out by refrigerating the juice overnight. Strain juice before making jelly.
	4. Mixture cooked too slowly or too long.	4. Cook at a rapid boil. Remove from heat immediately when jelling point is reached. Make small batches at a time; do not double tested recipes.
Crystals in grape jelly.	1. Tartrate crystals.	1. Formed from the tartaric acid naturally present in grapes. To minimize crystal formation, let the freshly-extracted grape juice stand in the refrigerator two to five days. Pour or decant and strain the clear juice again through a jelly bag or coffee filter before making the jelly.

Synersis or weeping. Product is safe to eat.	1. Excess acid is product makes pectin unstable.	1. Maintain proper acidity of product.
	2. Storage place too warm or storage temperature fluctuated.	2. Store processed jars in a cool, dark and dry place. Refrigerate after opening.
	3. Product was sealed with paraffin.	3. Seal with lids and process in boiling water canner.
Darker than normal color. Dark products are safe to eat, but may not have top-quality flavor.	1. Overcooking sugar and juice.	1. Avoid long boiling. Best to make small quantity of jelly and cook rapidly.
	2. Stored to long or at too high a temperature.	2. Store processed jars in a cool, dry, dark place and use within one year. Refrigerate after opening.
Cloudiness. Safe to eat unless there are moving bubbles or product appears spoiled.	1. Green fruit (starch).	1. Use firm, ripe, or slightly under ripe fruit.
	2. Imperfect staining of homemade juice.	2. Do not squeeze juice, but let it dip through jelly bag.
	3. Jelly or jam allowed to stand before it was poured into jars or poured too slowly.	3. Pour into jars immediately upon reaching gelling point. Work quickly.
	4. If product dose not have airtight seal, may denote spoilage.	4. Seal with lids and process in boiling water canner.
Dark surface. If there is no mold on or in the jelly, it is safe to eat.	1. Air in jar.	1. Indicates the product was not processed, had to much headspace or the seal failed.
Wine-like flavor or odor.	1. Inadequate heat processing or stored too long in the refrigerator.	1. Caused by yeast fermentation of the sugar to alcohol and carbon dioxide.

BOILING WATER CANNING PROCESS

1. Before you start preparing your food, fill the canner halfway with clean water. This is approximately the level needed for a canner load of pint jars. For other sizes and numbers of jars, adjust the amount of water in the canner so it will be 1 to 2 inches over the top of the filled jars.
2. Preheat water to 140°F for raw-packed foods and to 180°F for hot-packed foods. Food preparation can begin while this water is preheating. Do not have the water boiling when you add the jars.
3. Fill, fit with lids, load onto the canner rack and use the handles to lower the rack into the water; or fill the canner with the rack in the bottom, one jar at a time, using a jar lifter. When using a jar lifter, make sure it is securely positioned below the neck of the jar (below the screw band of the lid). Keep the jar upright at all times. Tilting the jar could cause food to spill into the sealing area of the lid.
4. Add boiling water, if needed, so the water level is at least 1 inch above jar tops. Pour the water around the jars, not on them. For process times over 30 minutes, the water level should be at least 2 inches above the tops of the jars.
5. Turn heat to its highest position, cover the canner with its lid, and heat until the water in the canner boils vigorously.
6. Set the timer for the total minutes required for processing the food, adjusting for altitude.
7. Keep the canner covered and maintain a boil throughout the process schedule. The heat setting may be lowered a little as long as a complete boil is maintained for the entire process time. If the water stops boiling at any time during the process, bring the water back to a vigorous boil and begin the timing of the process over, from the beginning.
8. Add more boiling water, if needed, to keep the water level above the jars.
9. When the jars have boiled for the recommended time, turn off the heat and remove the canner lid. Wait no more than 5 minutes before removing jars.
10. Using a jar lifter, remove the jars without tipping and place them on a towel, leaving at least 1-inch spaces between the jars during cooling. Let jars sit undisturbed to cool at room temperature for 12 to 24 hours.



ATMOSPHERIC STEAM CANNING PROCESS

1. Use a research tested recipe and processing time developed for a boiling water canner when using an atmospheric steam canner. An atmospheric steam canner may be used with recipes approved for half-pint, pint, or quart jars.
2. Add enough water to the base of the canner to cover the rack. (Follow manufacturer recommendations.)
3. Preheat water to 140°F for raw-packed foods and to 180°F for hot-packed foods. Food preparation can begin while this water is preheating. Do not have the water boiling when you add the jars.
4. . Heat jars prior to filling with hot liquid (raw or hot pack). Do not allow the jars to cool before filling.
5. Load filled jars, fitted with lids, onto the canner rack and place the lid on the canner base.
6. Turn heat to its highest position to boil the water until a steady column of steam (6-8 inches) appears from the vent hole(s) in the canner lid. Jars must be processed in pure steam environment.
7. If using a canner with a temperature sensor, begin processing time when the temperature marker is in the green zone for your altitude. If using a canner without a temperature sensor, begin processing time when a steady stream of steam is visible from the vent hole(s).
8. Set the timer for the total minutes required for processing the food, adjusting for altitude. 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, do not open the canner to add water.
9. Monitor the temperature sensor and/or steady stream of steam throughout the entire timed process. Regulate heat so that the canner maintains a temperature of 212°F. 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.
10. At the end of the processing time, turn off the heat and wait 2 to 3 minutes. Carefully remove the lid, lifting the lid away from you.
11. Using a jar lifter, remove the jars without tipping and place them on a towel, leaving at least 1-inch spaces between the jars during cooling. Let jars sit undisturbed to cool at room temperature for 12 to 24 hours.



PRESSURE CANNING PROCESS – QUICK STEPS

1. Use reputable, research-based recipe.
2. Prep work area, food and jars.
3. Heat 2-3” canner water (not boiling).
Hot Pack: 180°F, Raw Pack: 140°F
4. Jars in canner; lid on; weight off; high heat.
5. Vent 10 minutes.
6. Weight on.
7. Pressurize; lower heat to maintain pressure.
8. Start time; process, adjust heat as needed.
9. Ding! Timer off; heat off.
10. Wait until pressure drops to 0.
11. Weight off.
12. Cool 10 minutes more.
13. Lid off; jars out.
14. Cool jars, undisturbed 12-24 hours.
Check seals; remove rings, clean jars.
15. Label and store sealed jars.
Cool, dry, dark location.
Use within 1 year for best quality.

ADDITIONAL READING MATERIALS

Freezing Fruit

https://nchfp.uga.edu/publications/uga/uga_freeze_fruit.pdf

Peach Varieties Guide - Characteristics, harvest dates, and uses for eating, home canning, freezing and preserving- which peaches to pick and why!

<https://pickyourown.org/peachvarieties.htm>

Preserving Plums and Prunes

<https://extension.oregonstate.edu/sites/default/files/documents/8836/sp50586preservingplumsandprunes.pdf>

Plums and Prunes

<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=38579>

Peaches, Apricots, Nectarines

[Let's Preserve: Peaches, Apricots, Nectarines \(psu.edu\)](#)