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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
June 19, 2024
Cherries and Berries

***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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BERRY JAMS

(Blackberry, Blueberry, Boysenberry, Dewberry, Gooseberry, Loganberry, Raspberry, Youngberry)

Source: So Easy To Preserve, Edition 2014, page 217

Yield: 7 or 8 half-pints

INGREDIENTS

9 cups crushed berries
6 cups sugar

Sterilize canning jars. Combine berries and sugar. Bring slowly to a boil, stirring occasionally until sugar dissolves. Cook rapidly to, or almost to, jellying point, depending upon whether a firm or soft jam is desired. As mixture thickens, stir frequently to prevent sticking. Pour hot jam into hot jars, leaving 1/4-inch headspace. Wipe jar rims and adjust lids. Process 5 minutes in a Boiling Water Bath.

NOTE:

If seedless jam is preferred, crush berries may be heated until soft and pressed through a sieve or food mill; then add sugar and proceeds as above.

FRUIT SHRUB

Source: https://www.ballmasonjars.com/blog?cid=fruit-shrub-ball-recipes

A shrub is a fruit syrup mixed with vinegar. Historically, shrubs were made as a way to preserve fruit to drink, mixed with soda or water. Today, with the addition of different vinegars, sugars, spices, and herbs, shrubs have become a way to preserve and enhance fruit flavor. Use the shrub traditionally with soda water over ice or mix creatively into cocktails. Each sip will be reminiscent of an era when ingenuity surpassed the simple desire to preserve a summer bounty.

Recipe excerpted from The All New Ball® Book of Canning and Preserving, published by Oxmoor House (2016).

Makes: about 1 pint

Prep: 5 Minutes

Chill: 1 to 3 Days (or until sugar dissolves and fruit releases its juice)

INGREDIENTS

1 cup crushed fruit (such as strawberries, peaches, apricots, grapes, plums, berries, or cherries)
1 cup sugar
1 cup vinegar (such as unfiltered apple cider, balsamic, sherry, or red wine vinegar)

TOOLS & PRODUCTS USED

1-quart canning jar
1-pint canning jar

DIRECTIONS

1. Combine crushed fruit and sugar in a 1-quart canning jar. Cover and shake to combine. Chill 1 to 3 days or until sugar dissolves and fruit releases its juice.
2. After 1 to 3 days, pour fruit mixture through a wire-mesh strainer into a 2-cup glass measuring cup, pressing with the back of a spoon to release as much juice as possible (about 3⁄4 cup); discard solids. Stir in vinegar. Transfer mixture to a 1-pint jar. Cover with lid and chill 2 weeks before serving.

STRAWBERRY JAM WITH LIQUID PECTIN

Source: Ball, Complete Book of Home Preserving, 2006, 2012; page 41

Yield about eight 8-ounce jars

INGREDIENTS

3 3/4 cups crushed hulled strawberries
4 tbsp lemon juice
7 cups granulated sugar
1 pouch liquid pectin

DIRECTIONS

1. Prepare canner, jars and lids.
2. In a large, deep stainless-steel saucepan, combine strawberries, lemon juice and sugar. Over high heat, stirring constantly, bring to a full rolling boil that cannot be stirred down. Stir in pectin. Boil hard, stirring constantly, for 1 minute. Remove from heat and skim off foam.
3. Ladle hot jam into hot jars, leaving 1/4-inch headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot jam. 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 10 minutes. Remove canner lid. Wait 5 minutes, then remove jars, cool and store.

TART CHERRY PIE FILLING

Source: Ball, Complete Book of Home Preserving, 2006, 2012; page 41

Yield about eight pint jars or four quart jars

INGREDIENTS

10 lbs. frozen tart red cherries, thawed in the refrigerator for 24 hours
3 1/2 cups granulated sugar
1 cup Clearjel
1/2 tsp ground cinnamon
1/4 cup lemon juice

DIRECTIONS

1. In a colander placed over a large bowl, drain thawed cherries, stirring occasionally, until you have collected 8 cups of juice, about 2 hours. Set liquid and cherries aside.
2. Meanwhile, prepare canner, jars and lids.
3. In a large stainless-steel saucepan, which together 4 cups cherry liquid, sugar, Clearjel and cinnamon. Bring to boil over medium-high heat, stirring constantly and boil until thickened and mixture begins to bubble. Add lemon juice, return to a boil and boil for 1 minute, stirring constantly. Add reserved cherries all at once. Return to a boil over medium-high heat, stirring constantly and gently. Remove from heat.
4. Ladle hot pie filling into hot jars, leaving 1 inch headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot filling. Wipe rim. Center lid on jar. Screw band down until resistance is met, then increase to fingertip-tight.
5. Place jars in canner, ensuring they are completely covered with water. Bring to a boil and process both pint and quart jars for 35 minutes. Remove canner lid. Wait 5 minutes, then remove jars, cool and store.

Variation

Sweet Black Cherry Pie Filling: This luscious filling is wonderful in Black Forest cake or spread generously over an angel food care. Substitute sweet black cherries for the tart red cherries. Drain thawed sweet cherries until you have collected 7 cups juice. Decrease the sugar to 2 1/2 cups and increase the lemon juice to 1/3 cup.

FREEZING FRUIT

Source: https://extension.colostate.edu/topic-areas/nutrition-food-safety-health/freezing-fruits-9-331/#:~:text=Tray%20pack.,and%20return%20promptly%20to%20freezer.

Quick Facts…

- Freezing is one of the simplest and least timeconsuming ways to preserve foods at home.
- Berries and cherries are best frozen soon after harvest. Peaches, plums and apples may need to fully ripen before freezing.
- Small whole fruits, such as berries or cherries, can be frozen individually on trays, packaged in bags and later used in salads or garnishes.
- Most fruits maintain high quality for 8 to 12 months at 0 degrees F or below.
- Citrus fruits and citrus juices may be stored satisfactorily for 4 to 6 months.

Freezing is one of the simplest and least time-consuming ways to preserve foods at home. Freezing does not sterilize food; the extreme cold simply retards growth of micro-organisms and slows down changes that affect quality or cause spoilage in food. Properly frozen fruits retain much of their fresh flavor and nutritive value. Their texture may be somewhat softer, however, than fresh fruit.

Selecting Freezing Containers

To prevent evaporation and retain the highest quality in frozen foods, packaging materials should be moistureand vapor-proof. Glass jars and metal and rigid plastic containers meet these criteria. Many packaging materials designed for frozen food, including most plastic bags and heavily waxed cartons, are not moisture- and vapor-proof, but are sufficiently moisture- and vapor-resistant to be used satisfactorily. Paper cartons from cottage cheese or milk are not sufficiently moisture- and vaporresistant for quality frozen foods. If these cartons are used, keep the food no more than two weeks for best quality.

Container shape and size is another consideration. Food can be removed easily before thawing if containers have straight sides or sides that flare out. Square or rectangular flat-sided containers waste less freezer space than round containers.

Selecting and Preparing Fruit

Berries and cherries are best frozen soon after harvest. Peaches, apricots, plums, apples and pineapples may need to be held a short time after harvest to fully ripen before freezing.

Sort, wash and drain fruits carefully, discarding parts that are green or of poor quality. Do not allow fruits to soak in wash water – they will lose nutrients and flavor. Prepare fruits as they will be used: stemmed, pitted, peeled and sliced. It is best to prepare enough fruit for only a few containers at a time, especially for fruits that darken rapidly.

Do not let galvanized equipment come into direct contact with fruit. The acid in the fruit dissolves zinc, which is poisonous. Also be wary of iron utensils or chipped enamel ware, as metallic offflavors can result.

Preventing Darkening

Some fruits need pretreatment to prevent darkening. There are several antidarkening treatments that may be used.

Ascorbic acid (vitamin C) is effective in preserving color and flavor and adds nutritive value. Ascorbic acid is available from pharmacies or where canning supplies are sold. To use, dissolve crystalline or powdered forms in a little cold water. When using tablets, crush first so they dissolve easily.
For syrup packs, dissolve 1/2 teaspoon crystalline ascorbic acid or 1,500 milligrams vitamin C in each quart of cold syrup shortly before using. Stir it in gently so as not to stir in air. Refrigerate until ready to use.

For sugar and unsweetened packs, sprinkle 1/4 teaspoon crystalline ascorbic acid dissolved in 1/4 cup of cold water over each quart of fruit just before adding sugar, if used. In fruit juices, add 1/4 teaspoon ascorbic acid directly to each quart of juice. Stir only enough to dissolve ascorbic acid.

In crushed fruits and fruit purees, add 1/4 teaspoon crystalline ascorbic acid dissolved in 1/4 cup of cold water to each quart of the fruit preparation and mix.

Ascorbic acid mixtures. Special commercial anti-darkening preparations (ascorbic acid mixed with sugar or with sugar and citric acid) also may be used to retard darkening. Follow manufacturer's directions.
Citric acid or lemon juice may be used for treating some fruits. However, neither is as effective as ascorbic acid. Dissolve 1/4 teaspoon crystalline citric acid or 3 tablespoons of lemon juice in each quart of cold water. Dip the prepared fruit in the solution and leave for one to two minutes. Drain and pack with sugar, syrup, water or fruit juice. One gallon of citric acid or lemon juice solution treats about 1 bushel of fruit.
Steaming for a few minutes before packing is enough to prevent firm fruits, such as apples, from darkening.

Methods of Packing Fruits

There are several ways to pack fruit for freezing. Fruits packed in syrup generally are best for most cooking processes. Small whole fruits, such as berries, packed on trays are good for salads or garnishes. (See Table 1 for sugar syrup recipes.)

Syrup pack. A 30-percent syrup (1 3/4 cup sugar per 4 cups water) is recommended for most fruits. Lighter syrups are lower in caloric content and especially desirable for mild-flavored fruits, such as melons. Heavier syrups may be needed for very sour fruits. Allow 1/2 to 2/3 cup of syrup for each pint of fruit.
To pack fruit in syrup, pour 1/2 cup cold syrup into each container. Add fruit and cover with additional syrup, leaving sufficient headspace at top of container. Allow 1/2 inch of headspace for wide-top pints, 1 inch for wide-top quarts, 3/4 inch for narrow-top pints and 1 1/2 inches for narrow-top quarts. Allow 1 1/2 inches of headspace for juices packed in narrow-top containers, regardless of size.

Sugar pack. Place prepared, cut fruit in a bowl or shallow pan. Sprinkle sugar over the fruit (see specific fruit for amount). Mix gently with a large spoon until the sugar dissolves and juice is drawn out. Pack in containers, allowing the headspace recommended for syrup-packed fruit.
Unsweetened pack. Pack prepared fruit into containers without liquid or sweetening, or cover with water containing 1 teaspoon ascorbic acid per quart of water. Nonnutritive sweeteners may be added to the water to provide sweetness. Fruit also may be sweetened at the time of serving.
Soft fruits may be packed in their own juice by crushing the fruit lightly to produce juice. For firmer fruits, puree a small amount of the fruit to obtain enough juice to cover.

Pack foods tightly to cut down on the amount of air in the package. Press out as much air as possible for fruits packed in bags. Allow 1/2 inch of headspace for fruits packed without juice or liquid. For fruits packed in juice or liquid, allow headspace recommended for syrup packs.

Tray pack. Spread small, whole fruits, such as strawberries, raspberries, blueberries and sweet cherries, in a single layer on shallow trays and freeze. Remove and quickly package in labeled freezer bags or containers removing as much air as possible from containers and allowing no headspace. Seal and return promptly to freezer.

Table 1: Sugar syrup recipes.

Type of syrup (% syrup)	Sugar (cups)	Water (cups)	Approx. yield of syrup (cups)	Calorie content per 2/3 cup
10	1/2	4	4 1/2	57
20	1	4	4 3/4	108
30	1 3/4	4	5	180
40	2 3/4	4	5 1/3	266
50	4	4	6	344

Dissolve sugar in cold or hot water. If hot water is used, cool syrup before using. Syrup may be made the day before and kept covered in the refrigerator. Up to one-fourth of the sugar may be replaced, amount for amount, with corn syrup or honey.

Sealing, Labeling and Storing

Before closing, make sure sealing edges are free of moisture or food. Place a small piece of crumpled parchment paper or other water-resistant wrapping material between the fruit and the lid of juice- or liquid-packed fruits to help keep the fruit submerged in the liquid. Close and carefully seal the container. Label packages plainly. Include name of food, date and type of pack.

Freeze packaged fruits as quickly as possible at 0 degrees F or below. For quickest freezing, place packages against freezing plates or coils in single layers. Freeze only as much at one time as will freeze within 24 hours.

Most fruits maintain high quality for eight to 12 months at 0 degrees or below. Citrus fruits and citrus juices may be stored for four to six months. Unsweetened fruits lose quality faster than those packed

in sugar or syrup. Longer storage will not make the food unfit for use, but may impair its quality. Post a list of the frozen foods with freezing dates near the freezer, and check the packages off the list as they are removed.

Table 2: Fruit freezing guide.

Fruit	Preparation	Type of Pack
Apples	Wash, peel, core and slice into antidarkening solution – 3 tablespoons lemon juice per quart of water.	Pack in 30 to 40 percent syrup, adding 1/2 teaspoon crystalline ascorbic acid per quart of syrup. Or sprinkle with solution of 1/4 teaspoon ascorbic acid dissolved in 1/4 cup cold water per quart of fruit. Pack dry or with up to 1/2 cup sugar per quart of apple slices.
Applesauce	Wash, peel if desired, core and slice. Add 1/3 cup water to each quart of slices. Cook until tender. Cool and strain.	Sweeten to taste with 1/4-3/4 cup sugar per quart of sauce. Pack into containers.
Apricots	Wash, halve, pit. Peel and slice if desired. If apricots are not peeled, heat in boiling water for 1/2 minute to keep skins from toughening during freezing. Cool in cold water, drain.	Pack in 40 percent syrup, adding 3/4 teaspoon crystalline ascorbic acid per quart of syrup. Or sprinkle with ascorbic acid solution and pack without sugar as described for apples.
Avocados	Peel soft, ripe avocados. Cut in half, remove pit, mash pulp.	Add 1/8 teaspoon crystalline ascorbic acid to each quart of puree. Package in recipe-size amounts.
Berries	Select firm, fully-ripe berries. Sort, wash, drain.	Use 30 percent syrup pack, dry unsweetened pack, dry sugar pack, (3/4 cup sugar per quart of berries), or tray pack.
Cherries (sour or sweet)	Select well-colored, tree-ripened cherries. Stem, sort, wash thoroughly. Drain and pit.	Pack in 30 to 40 percent syrup to which has been added 1/2 teaspoon of ascorbic acid per quart. For pies and other cooked uses, pack in dry sugar using 3/4 cup sugar per quart of fruit.
Citrus fruits	Select firm fruit, free of soft spots. Wash (section or slices) and peel. Section fruit, removing all membranes and seeds.	Pack in 40 percent syrup or in fruit juice. Add 1/2 teaspoon ascorbic acid per quart of syrup or juice.
Citrus fruit juice	Select fruit as directed for sections. Squeeze juice using squeezer that does not press oil from rind.	Sweeten with 2 tablespoon sugar per quart of juice or pack unsweetened. Add 3/4 teaspoon ascorbic acid per gallon of juice.
Fruit juices (noncitrus)	Select fully ripe fruit. Crush. Heat flows from pulp. Strain through cloth bag.	Add sugar to taste – approximately 1/4 cup per quart. Pour into containers slightly until juice and/or ice cube trays and freeze. Remove cubes from trays and store in freezer bags.
Grapes	Select firm, ripe grapes. Wash and stem. Leave seedless grapes whole. Cut grapes with seeds in half and remove seeds.	Pack in 20 percent syrup or pack without sugar. Use dry pack for halved and tray pack for whole grapes.

Melons (cantaloupe, honeydew, watermelon)	Select firm-fleshed, well-colored, ripe melons. Wash rinds well. Cut open, scoop out seeds. Slice or cut in chunks.	Pack in 30 percent syrup or pack dry using no sugar. Pulp also may be crushed (except watermelon). Add 1 tablespoon sugar per quart and freeze in recipe-size containers.
Peaches or nectarines	Select firm, ripe fruit. Sort, wash, pit and peel. Cut in halves, quarters or slices into antidarkening solution — 3 tablespoons lemon juice per quart of water.	Pack in 30-40 percent syrup, adding 1/2 teaspoon crystalline ascorbic acid per quart of syrup. Or sprinkle each quart of fruit with solution of 1/4 teaspoon ascorbic acid dissolved in 1/4 cup cold water. Add up to 2/3 cup sugar, mix well and pack in containers. May also be packed in cold water containing 1 teaspoon ascorbic acid per quart of water.
Pears	Select firm, well-ripened fruit. Wash, peel, core; cut in halves or slices. Heat in boiling 40 percent syrup 1 to 2 minutes, depending on size of pieces. Drain and cool.	Pack in cold 30-40 percent syrup. Add 3/4 teaspoon ascorbic acid to each quart of syrup, if desired.
Plums and prunes	Select firm, deep-colored fruit. Sort and wash. Leave whole or cut in halves or quarters.	Pack in 40 percent syrup. Add 1/2 teaspoon ascorbic acid per quart of syrup. Or pack whole fruit into containers without sugar or syrup.
Rhubarb	Select firm, tender, well-colored stalks. Wash, trim and cut into 1 to 2-inch pieces. Heat in boiling water 1 minute and cool promptly in cool water to help retain color and flavor, if desired.	Pack tightly into containers without sugar or with 40 percent syrup.

References

Andress, E. and Harrison, J. 2006. So Easy to Preserve (5th ed.) University of Georgia Cooperative Extension Service, Athens, GA.

* Colorado State University Extension foods and nutrition specialist and professor, food science and human nutrition. 8/94. Revised 4/13.
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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.