



LET'S PRESERVE

JELLY, JAM, SPREADS

WP 382-99

These processing recommendations are for West Virginia conditions (maximum altitude, 4,000 feet). For canning directions in other locations, consult your county Extension office.

General canning procedures

Prepare products as described in the following pages. All products should be filled hot into sterile half-pint or pint canning jars, leaving 1/4-inch headspace. To sterilize empty jars, put them open side up on a rack in a boiling-water canner. Fill the canner and jars with hot (not boiling) water to 1 inch above top of jars. Boil jars 14 minutes. Remove and drain hot sterilized jars one at a time and fill with food. Food residue should be removed from the jar sealing edge with a clean, damp paper towel. New two-piece canning lids prepared according to manufacturer's directions should be added. After screw bands are tightened, jars should be processed in a boiling-water canner.

To process in a boiling-water canner, fill canner halfway with water and preheat to 180 degrees F. Load jars into the canner rack and lower with handles; or load one jar at a time with a jar lifter onto rack in canner. Add water, if needed, to a level of 1 inch above jars and add cover. When water boils vigorously, lower heat to maintain a gentle boil, and process jars of the product for the time given below.

Process times

It is recommended that hot pack is used for all jellies and jams with or without added pectin. Use only half-pint and pint jars and process for 10 minutes. When preparing peach-pineapple spread, the hot pack method should be used. Half-pint jars should be processed for 20 minutes and pint jars should be processed for 30 minutes.

After processing is completed, remove jars from the canner with a jar lifter and place on a towel or rack. Do not retighten screw bands. Air-cool jars 12 to 24 hours. Remove screw bands and check lid seals. If the center of the lid is indented, wash, dry, label, and store jar in a clean, cool, dark place. If lid is unsealed, examine and replace the jar if defective, use new lids, and reprocess as before. Wash screw bands and store separately. Jelly, jam, and spreads are best if consumed within a year and safe as long as lids remain vacuum-sealed.

Making jelly without added pectin

Use only firm fruits naturally high in pectin. Select a mixture of about $\frac{3}{4}$ parts ripe fruit and $\frac{1}{4}$ part underripe fruit. One pound of fruit should yield at least 1 cup of clear juice. Do not use commercially canned or frozen fruit juices because their pectin content is too low. Using peels and cores adds pectin to the juice during cooking of the fruit and increases jelly firmness.

Wash all fruits thoroughly before cooking. Cut firm, larger fruits into small pieces. Crush soft fruits or berries. Add water to fruits as indicated in Table 1. Put fruit and water in a large saucepan and bring to a boil. Simmer, stirring occasionally, for the amount of time listed or until the fruit is soft.

When fruit is tender, press lightly through a colander. Then, let juice drip through a double layer of cheesecloth or a jelly bag. Excessive pressing or squeezing of cooked fruit will cause cloudy jelly.

Using no more than 6 to 8 cups of extracted fruit juice at a time, measure and combine the proper quantities of juice, sugar, and lemon juice (see Table 1) and heat to boiling. Stir until the sugar is dissolved. Boil over high heat, stirring frequently, until the gelling point is reached.

To test jelly doneness, use one of the following methods:

Temperature test—Use a jelly or candy thermometer and boil to a temperature of 212 degrees F.

Sheet or spoon test—Dip a cool metal spoon into the boiling jelly mixture. Raise the spoon about 12 inches above the pan (out of steam). Turn the spoon so the liquid runs off the side. The jelly is done when the syrup forms two drops that flow together and sheet or hang off the edge of the spoon.

When the jelly is done, remove it from heat and quickly skim off foam. Using a wide-mouth funnel, ladle the jelly into sterile jars, leaving $\frac{1}{4}$ -inch headspace. Adjust lids and process the jars as described in the *process times* section.

Table 1. Measures for preparing jellies without added pectin

	To extract juice		Add to each cup of strained juice:		Jelly yield from 4 cups of juice (half-pints)
	Cups water to be added per pound of fruit	Minutes to simmer before extracting juice	Sugar (cups)	Lemon juice (optional)	
Apples	1	20 to 25	$\frac{3}{4}$	1- $\frac{1}{2}$ tsp	4 to 5
Blackberries	0 to $\frac{1}{4}$	5 to 10	$\frac{3}{4}$ to 1	—————	7 to 8
Crabapples	1	20 to 25	1	—————	4 to 5
Grapes	0 to $\frac{1}{4}$	5 to 10	$\frac{3}{4}$ to 1	—————	8 to 9
Plums	$\frac{1}{2}$	15 to 20	$\frac{3}{4}$	—————	8 to 9

Preparing jams without added pectin

For best flavor, use fully ripened fruit. Wash and rinse all fruits thoroughly before cooking. Do not soak. Remove stems, skins, and pits from fruit; cut into pieces and crush. For berries, remove stems and blossoms, and crush. Seedy berries may be put through a sieve or food mill. Measure crushed fruit into a large saucepan, using the ingredients in Table 2. Add sugar and bring to a boil while stirring rapidly and constantly. Continue to boil until mixture thickens. As you test for thickness, remember to allow for thickening during cooling.

To test for thickness use one of the following methods:

Temperature test—Use a jelly or candy thermometer and boil to a temperature of 212 degrees F.

Refrigerator test—Jam should be removed from heat for this test. Pour a small amount of boiling jam on a cold plate and put it in the freezing compartment of a refrigerator for a few minutes. The mixture gels when done.

When jam is done, remove it from heat and quickly skim off foam. Using a wide mouth-funnel, ladle the jam into sterile jars, leaving $\frac{1}{4}$ -inch headspace. Adjust lids and process the jars as described earlier.

Table 2. Measures for preparing jams without added pectin

	Cups crushed fruit	Cups sugar	Tbsp lemon juice	Jam yield (half-pints)
Apricots	4 to 4- $\frac{1}{2}$	4	2	5 to 6
Berries	4	4	0	3 to 4
Peaches	5- $\frac{1}{2}$ to 6	4 to 5	2	6 to 7

Jellies and jams with added pectin

Fresh fruits and juices, as well as some commercially canned or frozen fruit juice, may be used with commercially prepared powdered or liquid pectins. The order of combining ingredients depends on the type of pectin used. Complete directions for a variety of fruits are provided with packaged pectin. Jelly or jam made with added pectin requires less cooking, generally gives a larger yield, and has more natural fruit flavor. In addition, using added pectin eliminates the need to test for doneness. The following recipes are normally available with packaged pectins:

Jellies—Apple, crabapple, blackberry, boysenberry, dewberry, currant, elderberry, grape, mayhaw, mint, peach, plum, black or red raspberry, loganberry, rhubarb, and strawberry.

Jams—Apricot, blackberry, boysenberry, dewberry, loganberry, red raspberry, youngberry, blueberry, cherry, currant, fig, gooseberry, grape, orange marmalade, peach, pear, plum, rhubarb, strawberry, and spiced tomato.

Grape-plum jelly with pectin

Be sure to use Mason canning jars and self-sealing, two-piece lids; process the jars in boiling water as described on page 1. Purchase packaged pectins needed each year. Old pectins may result in poor gels. The following special jelly and jam recipes use packaged pectin.

3½ pounds ripe plums
3 pounds ripe Concord grapes
1 cup water
½ tsp. butter or margarine
(optional ingredient to reduce foaming)
8½ cups sugar
1 box (1¾ ounces) powdered pectin
Yield—About 10 half-pints

Preparation

Wash and pit plums; do not peel. Thoroughly crush plums and grapes, one layer at a time, in a saucepan. Add water. Bring to a boil, cover, and simmer 10 minutes. Strain juice through a jelly bag or double layer of cheesecloth. Measure sugar and set aside. Combine 6½ cups of juice with butter and pectin in a large saucepan. Bring to a hard boil, stirring constantly. Add the sugar and return to a full rolling boil. Boil hard for 1 minute, stirring constantly. Remove from heat, skim off foam, and quickly fill into sterile half-pint jars, leaving ¼-inch headspace. Adjust lids and process the jars for 10 minutes.

Blueberry-spice jam with pectin

2½ pints ripe blueberries
1 Tbsp. lemon juice
½ tsp. ground nutmeg or cinnamon
5½ cups sugar
¾ cup water
1 box (1¾ ounces) powdered pectin
Yield—About 5 half-pints

Preparation

Wash and thoroughly crush blueberries, one layer at a time, in a large saucepan. Add lemon juice, spice, and water. Stir in pectin and bring to a full rolling boil over high heat, stirring frequently. Add the sugar and return to a full rolling boil. Boil hard for 1 minute, stirring constantly. Remove from heat, quickly skim off foam and fill into sterile half-pint jars, leaving ¼-inch headspace. Adjust lids and process the jars for 10 minutes.

Pear-apple jam with pectin

2 cups peeled and crushed fully ripe pears

1 cup peeled and finely chopped apple

$\frac{1}{4}$ tsp. ground cinnamon

6 $\frac{1}{2}$ cups sugar

$\frac{1}{3}$ cup bottled lemon juice

6 ounces liquid pectin

Yield—About 7 to 8 half-pints

Preparation

Wash, peel, and core pears. Crush well and measure 2 cups into a large saucepan. Wash, peel, core and finely chop 1 cup of apples. Add apples to pears and stir in cinnamon. Thoroughly mix sugar and lemon juice into fruits and bring to a boil over high heat, stirring constantly. Immediately stir in pectin. Bring to a full rolling boil and boil 1 minute, stirring constantly. Remove from heat, quickly skim off foam and fill into sterile half-pint jars, leaving $\frac{1}{4}$ -inch headspace. Adjust lids and process the jars for 10 minutes.

Strawberry- rhubarb jelly with pectin

1 $\frac{1}{2}$ lbs red stalks of rhubarb

1 $\frac{1}{2}$ qts ripe strawberries

$\frac{1}{2}$ tsp. butter or margarine

(optional ingredient to reduce foaming)

6 cups sugar

6 ounces liquid pectin

Yield—About 7 half-pints

Preparation

Wash and cut rhubarb into 1-inch pieces and blend or grind. Wash, stem, and crush strawberries, one layer at a time, in a large saucepan and simmer 10 minutes. Strain juice with a jelly bag or double layer of cheesecloth. Combine and mix 3 $\frac{1}{2}$ cups of juice and sugar. Add butter if desired. Bring to a boil over high heat, stirring constantly. Immediately stir in pectin. Bring to a full rolling boil and boil hard 1 minute, stirring constantly. Remove from heat and quickly skim off foam, and fill into sterile half-pint jars, leaving $\frac{1}{4}$ -inch headspace. Adjust lids and process the jars for 10 minutes.

The following recipes use reduced amount of sugar:

Grape jelly with gelatin

2 Tbsp. unflavored gelatin powder
1 bottle (24 ounces) unsweetened grape juice
2 Tbsp. bottled lemon juice
2 Tbsp. liquid artificial sweetener (Saccharin™ is acceptable)

Yield—3 half-pints

Preparation

In a saucepan, soften the gelatin in the grape and lemon juices. Bring to a full rolling boil to dissolve gelatin. Boil 1 minute and remove from heat. Stir in sweetener. Fill quickly into hot sterile half-pint jars, leaving $\frac{1}{4}$ -inch headspace. Adjust lids. Do not process or freeze—store in refrigerator and use within 4 weeks.

Apple jelly with gelatin

2 Tbsp. unflavored gelatin powder
1 quart bottled unsweetened apple juice
2 Tbsp. bottled lemon juice
2 Tbsp. liquid Saccharin™ sweetener
Food coloring, if desired

Yield—4 half-pints

Preparation

In a saucepan, soften gelatin in apple and lemon juices. To dissolve gelatin, bring to a full rolling boil and boil 2 minutes. Remove from heat. Stir in sweetener and food coloring, if desired. Pour into sterile half-pint jars, leaving $\frac{1}{4}$ -inch headspace. Adjust lids. Do not process or freeze—store in refrigerator and use within 4 weeks.

Variation: For spiced apple jelly, add two 3-inch sticks of cinnamon and four whole cloves to mixture before boiling. Remove both spices before adding the sweetener and food coloring.

Peach-pineapple spread

4 cups drained peach pulp obtained as directed below
2 cups drained, unsweetened crushed pineapple
 $\frac{1}{4}$ cup bottled lemon juice
2 cups sugar (optional)

Yield—5 to 6 half-pints

Variation: The above recipe may also be made with any combination of peaches, nectarines, apricots, and plums. It may also be made without sugar or with as little as 2 cups sugar. Nonnutritive sweeteners may be added; however, the sweetening power of aspartame may be lost within 3 to 4 weeks.

Preparation

Thoroughly wash 4 to 6 pounds of firm, ripe peaches. Drain well. Peel and remove pits. Grind fruit flesh with a medium or coarse blade or crush with a fork. Do not use a blender. Place ground or crushed fruit in a 2-quart saucepan. Heat slowly to release juice, stirring constantly, until fruit is tender. Place cooked fruit in a jelly bag or strainer lined with four layers of cheesecloth. Allow juice to drip about 15 minutes. Save the juice for jelly or other uses. Measure 4 cups of drained fruit pulp for making spread. Combine the 4 cups of pulp, pineapple, and lemon juice in a 4-quart saucepan. Add up to 2 cups of sugar, if desired, and mix well. Heat and boil gently for 10 to 15 minutes, stirring often. Fill quickly into jars, leaving $\frac{1}{4}$ -inch headspace. Adjust lids and process 20 minutes for half-pint jars and 30 minutes for pint jars.

Nutrition information

Table 3. Average content of a tablespoon serving of jam and jelly

	Canned Jam	Canned Jelly
Calories	54	49
Carbohydrates, g	14	12.7
Fats, g	—	—
Sodium, mg	2	3

Adapted from *Let's Preserve Jelly, Jam, Spreads*, Pennsylvania State College of Agricultural Sciences, Cooperative Extension, and reviewed by Amy O'Dell, Graduate Assistant, and Guendoline Brown, Ph.D., Nutrition Specialist, 1999.

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