

# How To Make Jelly and Other Jellied Fruit Products

▶ Jelly, jam, preserves, conserves, marmalade, butters—any of these fruit products can add zest to meals. Most of them also provide a good way to use fruit not at its best for canning or freezing, such as the largest or smallest fruits and berries, and those that are irregularly shaped.

These products are much alike; all of them are fruit preserved with sugar and usually all are jellied to some extent. Their individual characteristics depend on the kinds of fruit used and the way they are prepared, the proportion of the different ingredients in the mixture, and the methods of cooking.

**Jelly** is made from fruit juice; the product is clear and firm enough to hold its shape when turned out of the container. **Jam**, made from crushed or ground fruit, tends to hold its shape but generally is less firm than jelly.

**Preserves** are whole small fruits or pieces of large fruits cooked in a syrup until clear. The syrup becomes thick and often slightly jellied. The ideal preserve retains the color and flavor of the fresh fruit.

**Conserves** are jams made from a mixture of fruits, usually including a citrus fruit. Often, raisins and nuts are added.

**Marmalade** is a tender jelly with small slices or pieces of mixed fruits distributed evenly throughout. A marmalade commonly contains citrus fruit.

**Butters** are made by cooking fruit pulp and sugar to a thick but still spreadable consistency. Butters are usually sweet, and spices are often added. Not all fruits have the natural properties needed for making satisfactory jellied products. But, with commercial pectins, there is no need to depend on the jellying quality of the fruit for successful results.

# **Four Essential Ingredients**

A jellied fruit product requires proper amounts of fruit, pectin, acid, and sugar.

**Fruit** gives each product its flavor and furnishes at least part of the pectin and acid required for a successful gel. Highly flavored varieties of fruits are best for jellied products because the fruit flavor is diluted by the large proportion of sugar necessary for proper consistency and good keeping quality.







**Pectin** is the gum in the cell walls of a plant that is primarily responsible for gel formation. Some kinds of fruit have enough natural pectin to make a high-quality product. Others require added pectin, particularly when they are used for making jelly, which should be firm enough to hold its shape. All fruits have less pectin when they are fully ripe than when they are underripe.

Commercial fruit pectins, which are made from apples or citrus fruits, may be used with any fruit. They are on the market as a liquid instant, or powder. Either form of pectin is satisfactory when used in a recipe developed especially for that form, but you can't use liquid in a recipe that calls for powder or powder in a recipe that calls for liquid.

Most of the recipes included here require no added pectin. However, many people like to use commercial pectin when making jellied fruit products. There are four reasons why:

- Fruit that is fully ripe can be used.
- Cooking time is shorter and is standardized so that there is no question of when the product is done.
- The yield from a given amount of fruit is greater.
- The flavor is more like fresh fruit because of the decreased cooking time.

Store commercial fruit pectins in a cool, dry place so they will keep their gel-forming abilities. They should not be held over from one year to the next. Read the label on the package to find the expiration date. **Acid** is needed for flavor and for gel formation.

The acid content varies in different fruits and is higher in underripe than in fully ripe fruits. For fruits that are low in acid, you can add lemon juice or citric acid. Also, commercial fruit pectins contain some acid.

In the recipes included, lemon juice is included to supply acid when necessary. If you wish, use  $\frac{1}{10}$  teaspoon of crystalline citric acid in place of each tablespoon of lemon juice.

**Sugar** helps in gel formation, serves as a pre-serving agent and adds to the flavor of the jellied product. It also has a firming effect on fruit, which is useful in the making of preserves.

Beet and cane sugar can be used with equal success. Although they come from different sources, they have the same composition. Corn syrup or honey can replace part of the sugar, but not all.

# **Equipment Needed**

A large **deep sauce pot** is essential for cooking the ingredients. To bring a mixture to a full boil without boiling over, use an 8- or 10-quart kettle with a broad flat bottom.

A **jelly bag** or a **fruit press** may be used for extracting fruit juice for jellies. The bag may be made of several thicknesses of closely woven cheesecloth.

Use a jelly bag or cheesecloth to strain pressed juice. A special stand or a colander will hold the jelly bag.

A jelly, candy, or deep-fat **thermometer** is an aid in making fruit products without added pectin.

A **wide-mouth funnel** is needed for pouring or ladling jelly into the jars.

A **large metal pot** with a **close-fitting lid** is needed for water bath processing. A wire **rack** to fit the bottom of the pot to keep the jars from touching each other or the bottom or sides of the pot is also required. The pot should be deep enough to set the jars on the rack, allowing 1 or 2 inches of water above the tops of the jars plus a little extra space for boiling.

Other useful tools include a jar lifter, magnet lid wand, jar wrench, quart measure, standard liquid and dry measuring cup and spoons, bubble freer, paring and utility knives, food chopper, masher, reamer, grater, bowls, wire basket, colander, long-handled spoon, ladle, kitchen timer, clock with a second hand (use the same clock for timing throughout the cooking process), and a household scale.



# **Preparing Containers**

Use only **standard canning jars** and **two-piece lids** made for home canning. The best size storage jar is half-pint because jellies are best made up in small amounts. Six-ounce jars may also be used and you can use pint jars for other jellied products.

Purchase new canning lids. Check all jars for cracks and chips. Check all rings or band closures to ensure that they are free of rust. Discard any jars with cracks or chips, or rings or bands with rust: defects prevent airtight seals.

Prepare canning jars before you start to make the jellied product. Wash them in warm, soapy water and rinse with hot water. Keep them in hot water until they are used. Only jars may be washed in the dishwasher. Leave the jars in the dishwasher to keep them hot as well. Keeping the jars hot will prevent containers from breaking when filled with hot jelly or jam.

Wash and rinse all lids and bands. Metal lids with sealing compound need to be warm, not boiled. Follow the manufacturer's directions.

# **Preparation Tips**

#### For Fresher Flavor

To have jellied fruit products at their best, make up only the amount that can be used within a few months. They lose flavor in storage.

#### For Softer or Firmer Products

If using fruit with average jellying properties, select medium firm fruits to make jellied products according to directions in this publication. Because various lots of fruit differ in composition, it's not possible to develop formulas that will always give exactly the same results. If the first batch from one lot of fruit is too soft or too firm, you can adjust the proportions of fruit or the cooking time for the next batch.

- In products made without added pectin: If you want a softer product, shorten the cooking time. If you want a firmer product, lengthen the cooking time.
- In products made with added pectin: If you want a softer product, use 1/4 to 1/2 cup more fruit or juice. If you want a firmer product, use 1/4 to 1/2 cup less fruit or juice.

### To Use Canned, Frozen, or Dried Fruits

Any fresh fruit may be canned or frozen to use in jellied products later. Or, you can extract the juice to can or freeze it. Both fruit and juice should be canned or frozen unsweetened; if sweetened, subtract the amount of sugar used from the amount in the jelly or jam recipe. Can fruit in its own juice or with only a small amount of water. If you plan to use home-canned or frozen fruit for jelly without adding pectin, it's best to can or freeze partly underripe fruit.

Commercially canned or frozen fruits or juices can also be used in jellied products if they are unsweetened. Concentrated frozen juices make very flavorful jellies. Commercially canned or frozen products are made from fully ripe fruit. They require added pectin if used for jelly.

Dried fruits may be cooked in water until tender and used to make jams and conserves with or without added pectin, as required.



# To Help Prevent Floating Fruit

When cooking jam, conserves, and marmalades, remove mixture from heat and stir gently at frequent intervals for 5 minutes. Before each stirring, skim off all foam that appears on the surface.

# Filling and Sealing Containers

Prepare canning jars and lids according to instructions under Preparing Containers. Work quickly when packing and sealing jars.

Fill hot jars up to \( \frac{1}{4} \) inch to the top with hot jelly or fruit mixture. Wipe the jar rim clean and place the warm metal lid on the jar with the sealing compound next to the glass. Screw the metal band down fingertip tight. Process in a boiling water bath for 10 minutes.

To keep pieces of fruit from floating to the top, gently shake the jars occasionally as they cool.

# **Processing in a Water Bath**

Processing jellied fruit products in a boiling water bath is recommended in warm and humid climates like Alabama's. Use a clean container with a close-fitting lid. Use a wire rack in the bottom. Fill the water bath container half full of water and heat it.

Place hot, filled jars on the wire rack. Do not let jars touch each other or the sides of the container. Add enough hot water to cover the tops of the jars by about 1 or 2 inches. Bring water to a rolling boil and gently boil for 10 minutes.

Remove jars from water after canning and place them on a rack to cool. Do not tip jars to remove water atop the jar, as this could disturb the seal. Do not let them stand in a draft while cooling.

# Storing Jellied Fruit Products

Let jellied products stand 12 hours before storing to avoid breaking the seal. Label with the name, date, and batch number if you make more than one batch a day. Store in a cool, dry place. The shorter the storage time, the better the eating quality.

Uncooked jams may be held up to 3 weeks in a refrigerator; for longer storage, keep them in a freezer.



# Steps in Making Jelly

When making jelly, whether with or without added pectin, it is best to prepare only a small amount at a time. Do not double the jam or jelly recipe. Increasing the quantities given in the following recipes is not recommended.

# **Preparing Fruit**

Approximate amounts of fruits needed to yield the amount of juice called for are given in each recipe. However, the exact amount will vary with juiciness of the particular lot of fruit used.

Wash all fruits in cold running water, or wash them in several changes of cold water, lifting them out of the water each time. Do not let fruit stand in water.

Prepare fruit for juice extraction as directed in the chart on page 7.

# **Extracting Juice**

The method differs with each kind of fruit. Juicy berries may be crushed, and the juice pressed out without heating. For firm fruits, heating is needed to help start the flow of juice and usually some water is added.

Put the prepared fruit in a damp jelly bag or a fruit press. The clearest jelly comes from juice that has dripped through a jelly bag without pressing, but you can get a

greater yield of juice by twisting the bag of fruit tightly and squeezing or by using a fruit press. Re-strain pressed juice through a double thickness of damp cheesecloth or a damp jelly bag; do not squeeze the cloth or bag.

# Making Jelly with Added Pectin

Accurate timing is important. The mixture should boil 1 minute after adding pectin. Time should not be counted until the mixture has reached a full rolling boil—one that cannot be stirred down.

For best flavor, use fully ripe fruit when making jelly with added pectin.

### Making Jam and Jelly with Flex Batch Pectin

Flex batch pectin is best for customized jam and jelly recipes. Follow manufacturer's instructions.

# Making Jam or Jelly with Instant Pectin

Jellies made with instant pectin is best used for freezer jam. Follow manufacturer's instructions.

Making jelly without added pectin. Jellies made without added pectin require less sugar but longer boiling time to bring the mixture to the proper sugar concentration. Thus, the yield of jelly per cup of juice is less.

It's usually best to have part of the fruit under- ripe because it has a higher pectin content than fully ripe fruit. Using ¼ underripe and ¾ fully ripe fruit is generally recommended to assure sufficient pectin for jelly.

# **Testing for Doneness**

The biggest problem in making jelly without added pectin is knowing when it's done. It's particularly important to remove the mixture from the heat before it becomes overcooked. Undercooked jelly can sometimes be recooked to make a satisfactory product, but there is little that can be done to improve an overcooked mixture. Signs of overcooking are a change of color and a taste or odor of caramelized sugar.

Three methods that may be used to test for doneness follow. Of these, the temperature test is probably the most dependable.

### **Temperature Test**

Before cooking the jelly, take the temperature of boiling water with a jelly, candy, or deep-fat thermometer. Then cook the jelly mixture to a temperature 8 degrees F. higher than the boiling point of the water, using the same thermometer. At that point, the mixture should form a satisfactory gel.

For an accurate thermometer reading, have the thermometer in a vertical position and read it at eye level. The bulb of the thermometer must be completely covered with the jelly mixture, but must not touch the bottom of the kettle.

### **Spoon or Sheet Test**

Dip a cool metal spoon in the boiling jelly mixture. Then raise it at least a foot above the large saucepan, out of the steam, and turn the spoon so the syrup runs off the side. If the syrup forms two drops that flow together and fall off the spoon as one sheet, the jelly should be done. This test has been widely used by Alabama homemakers.

#### **Freezer Test**

Pour a small amount of boiling jelly on a cold plate and put it in the freezer compartment of a refrigerator for a few minutes. If the mixture gels, it should be done. During this test, the saucepan of jelly should be removed from the heat.

# **Jelly Problems**

High quality in jellied fruit products depends on so many complex factors that it is seldom possible to give just one answer to questions about problems. Using recipes from a reliable source and following the directions accurately is the surest way to succeed. But even that does not guarantee it. It is impossible to assure uniform results because the fruit varies so much.

The answers given here to questions commonly asked by people who have had problems suggest possible reasons for lack of success. One or more of the reasons given may be your problem.

#### Q. What makes jelly cloudy?

A. The jelly mixture was poured into glasses too slowly. The jelly mixture was allowed to stand before it was poured. The juice was not properly strained and so contained pulp. The jelly set too fast—usually the result of using fruit that is too green.

#### Q. Why do crystals form in jelly?

A. Crystals throughout the jelly may be caused by too much sugar in the jelly mixture or cooking the mixture too little, too slowly, or too long. Crystals that form at the top of jelly that has been opened and allowed to stand are caused by evaporation of liquid. Crystals in grape jelly may be tartrate crystals.

#### Q. What causes jelly to be too soft?

A. The mixture had too much juice, too little sugar, or was not acidic enough. Too big a batch was made at one time.

### Q. Can anything be done to make soft jellies firmer?

- A. It is not always possible to remake soft jellies to be satisfactory. However, a soft jelly can sometimes be improved by recooking it according to the directions given below. It is best to recook only 4 to 6 cups of jelly at one time.
  - To remake with powdered pectin: Measure the jelly to be recooked. For each quart of jelly, measure ¼ cup sugar, ¼ cup water, 2 tablespoons bottle lemon juice, and 4 teaspoons powdered pectin. Mix the pectin and water and bring to a boil, stirring constantly to prevent scorching. Add the jelly and sugar. Stir thoroughly. Bring to a full rolling boil over high heat, stirring constantly. Boil the mixture hard for ½ minute. Remove jelly from the heat, skim, pour into hot containers, and seal.
  - To remake with liquid pectin: Measure the jelly to be recooked. For each quart of jelly, measure ¾ cup sugar, 2 tablespoons lemon juice, and 2 tablespoons liquid pectin. Bring jelly to a boil over high heat. Quickly add the sugar, lemon juice and pectin, and bring to a full rolling boil, stirring constantly. Boil the mixture hard for 1 minute. Remove jelly from the heat, skim, pour into hot containers, and seal.
  - To remake without added pectin. Heat the jelly to a boil and boil for a few minutes. Use one of the tests described on page 5 to determine how long to cook it. Remove jelly from the heat, skim, pour into hot containers, and seal.

#### Q. What makes jelly syrupy?

**A.** Too little pectin, acid, or sugar. A great excess of sugar can also cause syrupy jelly.

#### Q. What causes weeping jelly?

**A.** Too much acid. The storage place was too warm or the temperature fluctuated.

### Q. What makes jelly too stiff?

A. Too much pectin—the fruit was not ripe enough or too much pectin was added. The jelly was overcooked.

#### Q. What makes jelly tough?

**A.** The mixture had to be cooked too long to reach the jellying stage, a result of too little sugar.

### Q. What makes jelly gummy?

A. It was overcooked.

### Q. What causes jelly to ferment?

A. Too little sugar or improper sealing.

### Q. What causes mold on jelly or jam?

**A.** An imperfect seal has made it possible for mold and air to get into the container.

# Q. What causes jelly or jam to darken at the top of the container?

**A.** The storage place was too warm. A faulty seal allowed air to leak in.

#### Q. What causes fading?

A. The storage place was too warm. The jelly was stored too long. Red fruits such as strawberries and raspberries are especially likely to fade.

### Q. Why does fruit float in jam?

**A.** The fruit was not fully ripe, was not thoroughly crushed or ground, was not cooked long enough, or was not properly packed in the jars.

#### **USDA RECOMMENDATION**

Current USDA recommendations require processing jelly for 10 minutes in the water bath canner to reduce the risk of spoilage due to the hot, humid climate of Alabama.



Table 1. Extracting Juice for Jelly¹				
Fruit <sup>2</sup>	Amount Needed	For About This Much Juice <sup>3</sup>	Procedure <sup>4</sup>	
Apples⁵ or Crabapples	3 pounds	4 cups	Wash. Remove stems and blossom ends. Do not peel or core. Cut fruit into small chunks. Add 3 cups of water. Cover and bring to a boil.	
			Reduce heat and simmer 20 to 25 minutes or until apples are soft	
Blackberries	2½ quarts	4 cups	Wash thoroughly. Crush berries and add ¾ cup water. Cover and bring to a boil over high heat. Reduce heat and simmer 5 minutes.	
Elderberries	3 pounds	3 cups	Wash. Remove large stems. Crush berries. Heat gently until juice starts to flow. Cover and simmer 15 minutes, stirring occasionally.	
Grapes⁴	3½-4 pounds	5 cups	Wash. Leave skins on. For cultivated grapes—add ½ cup water. For wild grapes—add 1 cup water. Crush fruit. Cover and bring to a boil over high heat. Reduce heat and simmer 10 minutes. Extract juice.	
			To prevent formation of crystals in jelly, let the juice stand in refrigerator overnight. Then strain off crystals.	
Jalapeno and Bell peppers	3 4	3 cups	Wash thoroughly. Remove stems and seeds. Run peppers through food grinder or blender.	
Muscadines	4 pounds	4 cups	Wash and remove stems. Leave skins on. Crush muscadines. Cover and bring to a boil over high heat. Reduce heat and simmer 5 to 10 minutes.	
Plums	4½-5 pounds	4 cups	Wash thoroughly. Do not peel or pit. Crush fruit. Add 2½ cups water. Cover. Bring to a boil over high heat. Reduce heat and simmer for 15 to 20 minutes.	
Strawberries	2½ quarts	3½ cups	Wash and remove caps. Crush berries in single layers. Add $\frac{3}{4}$ cup water. Cover and bring to a boil over high heat. Reduce heat and simmer 5 minutes.	

<sup>&</sup>lt;sup>1</sup> Jelly is much better when freshly made. Extracted juice may be frozen or canned for making jellies in small quantities as needed.

# Q. Can corn syrup or honey be used instead of sugar in making jelly and jam?

A. Either can be used in place of part, but not all, of the sugar in the recipes for jellied fruit products in this publication. In recipes without added pectin, light corn syrup can replace up to ¼ of the sugar in jellies and up to ½ of the sugar in other products. With added powdered pectin, corn syrup can replace up to ½ of the sugar in any of the products. With liquid pectin, corn syrup can replace up to 2 cups of the sugar.

Honey can replace up to a half of the sugar in any of the recipes where no pectin is added. In products made with added pectin, 2 cups of honey can replace 2 cups of sugar in most recipes. In the small recipes yielding 5 to 6 jars, only <sup>3</sup>/<sub>4</sub> to 1 cup of sugar should be replaced by honey. For preserves, use equal amounts of honey for sugar.

Note that the consistency of the product will change when honey is used because it is a liquid. Products made with honey will have a darker color than those made with sugar as the only sweetener and the flavor will be somewhat different. Light, mild-flavored honey generally is the best kind to use.

<sup>&</sup>lt;sup>2</sup> If no commercial pectin is to be used, use <sup>3</sup>/<sub>4</sub> fully ripe fruit and <sup>1</sup>/<sub>4</sub> slightly underripe fruit. If a commercial pectin is to be used, follow manufacturer's directions for extracting juice.

<sup>&</sup>lt;sup>3</sup> The juiciness of each lot of fruit will affect the amount of juice extracted.

<sup>&</sup>lt;sup>4</sup> Put prepared fruit in a damp jelly bag or a fruit press. See "Extracting Juice" on page 4.

<sup>&</sup>lt;sup>5</sup> The residue left after extracting juice for jelly may be used as a pulp for butters. See recipes on page 12.

Table 2. Recipes for Jellies					
Fruit	Ingredients	Procedure	Process Time	Approx. Yield	
Apples or Crabapples	4 cups juice* 2 tablespoons lemon juice 1 cup sugar	Combine juices and sugar and stir until sugar dissolves. Boil rapidly until jelly mixture sheets from a spoon. Skim off foam quickly. Pour jelly into hot canning jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	4 to 5 6-oz. jars	
Blackberries	3 cups sugar 1 cup juice*	Stir sugar into juice until it dissolves. Boil rapidly until jelly mixture sheets from a spoon. Remove from heat and skim off foam. Pour jelly into hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	5 6-oz. jars	
Elderberries	3 cups juice*  ½ cup lemon juice  7½ cups sugar  1 bottle liquid  pectin	Combine juices and sugar and stir until sugar dissolves. Boil over high heat. Remove from heat and add pectin, stirring constantly. Then boil hard for 1 minute. Remove from heat and skim off foam. Pour jelly into hot canning jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	3 6-oz. jars	
Grapes	3 cups sugar 4 cups juice*	Stir sugar into juice until it dissolves. Boil rapidly until jelly mixture sheets from a spoon. Remove from heat and skim off foam. Pour jelly into hot canning jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	5 6-oz. jars	
Muscadines	3 cups sugar 4 cups juice*	Stir sugar into juice until it dissolves. Boil rapidly until jelly mixture sheets from a spoon. Remove from heat and skim off foam. Pour jelly into hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	5 to 6 6-oz. jars	
Peppers (Jalapeño & Bell)	2 cups pulp and juice* 1 cup white vinegar 5 cups sugar 1 bottle liquid pectin	Combine pulp, juice, and vinegar with sugar and stir until sugar is dissolved. Slowly boil for 10 minutes. Remove from heat and add pectin, stirring constantly. Then boil hard for 1 minute. Remove from heat and skim off foam. Pour jelly into hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	2 half pints	

Table 2. Recipes for Jellies					
Fruit	Ingredients	Procedure	<b>Process Time</b>	Approx. Yield	
Plums	3 cups sugar 4 cups juice*	Stir sugar into juice until it dissolves. Boil over high heat until jelly mixture sheets from a spoon. Remove from heat and skim off foam. Pour jelly into hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	5 6-oz. jars	
Strawberries	3 cups sugar 4 cups juice*	Stir sugar into juice until it dissolves. Boil over high heat until jelly mixture sheets from a spoon. Remove from heat and skim off foam. Pour jelly into hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in boiling water bath.	10 minutes	5 6-oz. jars	

<sup>\*</sup>See "Extracting Juice for Jelly," page 7.

Table 3. Recipes for Jams					
Fruit	Ingredients	Procedure	Process Time	Approx. Yield	
Blackberries	4 cups crushed berries 4 cups sugar	Sort and wash the berries. Remove any stems and caps. Crush the berries. Add sugar and stir well. Boil rapidly, stirring constantly until the mixture thickens. * Remove from heat and skim off foam. Fill hot canning jars, leaving ½ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	2 pints	
Figs	2 quarts figs  1/3 cup baking soda  2 quarts boiling water  1 cup sugar Juice of 1½ lemons	Wash figs, remove stems, but leave skins on. Sprinkle figs with baking soda. Cover with boiling water and let stand 5 minutes. Drain and rinse in two baths of clean, cold water. Grind figs with a food chopper, using a medium blade. Add sugar and lemon juice and cook rapidly until quite thick. * Pack in hot canning jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	3 to 4 pints	
Grapes or Muscadines	2 quarts grapes 6 cups sugar	Wash grapes and remove stems. Separate pulp from skins. If desired, chop skins in a blender or chopper. Then cook skins 15 to 20 minutes. Add only enough water to keep them from sticking, about ½ cup. Cook pulp separately, without water, until soft. Press pulp through a sieve or food mill to remove seeds. Combine pulp, skins, and sugar. Bring slowly to a boil, stirring occasionally until sugar dissolves. Then boil rapidly about 10 minutes, stirring frequently as the mixture thickens. * Pour boiling mixture into hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	15 minutes	3 pints	
Strawberries	4 cups crushed strawberries 4 cups sugar	Sort and wash berries. Remove any stems and caps. Crush the berries. Add sugar and stir well. Boil rapidly, stirring constantly until the mixture thickens. * Remove from heat and skim off foam. Fill hot canning jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	2 pints	

<sup>\*</sup>In judging thickness, remember that the mixture thickens some as it cools. The freezer test suggested for jelly (page 5) may be used.

Table 4. Recip	es for Preserves			
Fruit*	Ingredients	Procedure	Process Time	Approx. Yield
Figs	6 quarts figs 1 cup baking soda 6 quarts boiling water 8 cups sugar 2 quarts water	Wash figs, remove stems, but leave skins on. Sprinkle figs with baking soda. Cover with boiling water and let stand 5 minutes. Drain and rinse in two baths of clean, cold water. Add sugar and water to figs and cook rapidly until clear and tender. When figs are the desired texture, lift them out of syrup and place in a bowl. Continue boiling syrup until it is the desired thickness. Put figs back in syrup and bring to a boil. Pack hot into hot jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	Hot pack: 10 minutes	8 pints
Peaches	1 pound peeled, pitted peaches 1½ cups sugar ½ to ½ cup water	Wash peaches, remove stems, peel and remove pits. Cut into uniform-size pieces. Add the sugar and water and cook at once. Heat slowly to boiling, stirring constantly. Then boil rapidly. Cook until syrup is somewhat thick. Pack hot in hot canning jars leaving ¼ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	Hot pack: 10 minutes	2 pints
Pears	1 pound peeled, cored pears  1½ cups sugar  ½ to 1 cup water	Wash pears, remove stems, peel, and core. Cut into uniform-size pieces. Add sugar and water and cook at once. Stir while heating. Boil until tender. Then boil rapidly until syrup is thick. Pack hot in hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	Hot pack: 10 minutes	3 half pints
Strawberries	6 cups prepared strawberries 4½ cups sugar	Select large, firm, tart berries. Wash, drain, and remove caps. Combine strawberries and sugar in alternate layers. Let stand for 8 to 10 hours or overnight in the refrigerator or another cool place. Heat the fruit mixture to boiling, stirring gently. Then boil rapidly, stirring as needed to prevent sticking. Boil about 15 to 20 minutes until the syrup is somewhat thick. Remove from heat and skim off foam. Fill hot canning jars, leaving ½ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	2 pints

<sup>\*</sup>Select fruit at the firm-ripe stage. If fruit is to be left whole, it should be of uniform size and good shape.

Table 5. Re	Table 5. Recipes for Conserves					
Fruit	Ingredients	Procedure	<b>Process Time</b>	Approx. Yield		
Grapes	4½ cups grapes without skins  1 orange  4 cups sugar  1 cup seedless raisins  ½ teaspoon salt Skins from grapes  1 cup nuts, chopped fine	Sort and wash grapes and remove stems. Slip skins from grapes. Save the skins. Boil grapes, stirring constantly for about 10 minutes or until the seeds show. Then press through a sieve to remove seeds. Wash the orange and chop it fine without peeling it. Combine grapes and orange pieces with the sugar, raisins, and salt. Boil rapidly, stirring constantly until the mixture begins to thicken (about 10 minutes). Add the grape skins and boil, stirring constantly for about 10 minutes. Do not overcook. Add nuts and stir well. Remove from heat and skim off foam. Fill hot canning jars, leaving ½ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	15 minutes	4 pints		
Damson plum	<ul><li>4 pounds plums</li><li>2 oranges</li><li>6 cups sugar</li><li>1 pound raisins</li><li>1 pound chopped nuts</li></ul>	Sort and wash plums. Remove seeds and chop. Peel and chop oranges. Shred peel of half an orange to very fine strips. Combine plums, orange pulp, shredded orange peel, sugar, and raisins. Place over high heat. Cook rapidly about 10 minutes until bright and thick like jam, stirring constantly. Add nuts and cook 5 minutes longer, stirring constantly. Remove from heat and skim off foam. Fill hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	15 minutes	4 pints		
Pears	4 cups coarsely ground pears 1 lemon (juice and rind) 1 cup seedless raisins 3½ cups sugar ½ cup chopped pecans	Sort and wash fully ripe pears. Remove stems and peel. Grind pears using the coarse blade of a food chopper. Peel lemon, squeeze juice, and chop rind into small pieces. Combine pears, lemon juice and rind, raisins, and sugar. Place over high heat. Cook about 10 minutes until clear and thick, stirring constantly. Add nuts and cook 5 more minutes, stirring constantly. Remove from heat and skim off foam. Fill hot canning jars, leaving ½ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	2 pints		

Table 6. Recipes for Marmalades					
Fruit	Ingredients	Procedure	<b>Process Time</b>	Approx. Yield	
Peaches and	5 cups peaches	Remove stems, skins, and pits and finely chop or grind. Remove peel, white portion, and seeds from oranges and finely chop or grind pulp. Finely shred	10 minutes	3 pints	
Oranges	2 oranges				
	2 tablespoons				
	lemon juice				
	6 cups sugar	the peel of one orange. Combine all ingredients and stir well. Boil rapidly about 10 minutes until mixture thickens, stirring constantly. Remove from heat. Fill hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.			
Pears	2 pounds pears	Sort and wash fully ripe pears. Remove stems, skins, and cores and cut into small pieces. Peel and cut up oranges. Chop the peel of one orange in small pieces. Combine all ingredients. Cook rapidly about 10 minutes until thick and transparent, stirring constantly. Pour boiling hot into hot canning jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	1 pint	
	2 oranges				
	1 cup water				
	2 pounds sugar				

Table 7. Recipes for Butters					
Fruit	Ingredients	Procedure	Process Time	Approx. Yield	
Apples	16 cups apple pulp (about 32 apples) 1 cup vinegar 8 cups sugar 4 teaspoons cinnamon	Core and slice apples but do not peel. Add only enough water to cook apples until soft. Press through fine sieve and measure pulp. Combine all ingredients. Cook about 1½ hours, stirring frequently, until mixture remains in a smooth mass when a little is cooled. Pour hot into hot canning jars, leaving ¼ inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	6 pints	
Grapes	5 pounds grapes 5 cups sugar 2½ teaspoons ground cinnamon 2 teaspoons ground mace 2 drops clove oil	Sort and wash grapes. Remove stems. Slip skins from grapes. Save skins. Heat grapes about 10 minutes until seeds show, stirring constantly. Press through a sieve to remove seeds. Grind skins in a food chopper with a fine blade. Combine pulp, juice, and skins and cook until skins are tender. Add sugar and spices and cook very slowly, stirring constantly, until mixture has a jelly-like consistency. Pour boiling hot into hot canning jars, leaving 1/4 inch headspace. Adjust lids and screw bands. Process in a boiling water bath.	10 minutes	8 pints	

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