H O M E  M A K E R S

This present edition of the *Ball Blue Book* brings to you the latest and most approved methods and directions for Home Canning and Preserving.

The best of our former recipes, like old friends, have been retained and many delightful new ones have been added.

It is with sincere good wishes for your success in Home Canning and Preserving that we publish this revised edition of the *Ball Blue Book*.

BALL BROTHERS COMPANY
MUNCIE, INDIANA
They shall rise up and call her blessed—this woman, who—loving and thoughtful of future joy and health—secures the goodness of Nature at her best, and cans against the barren sameness of the Winter months. Well does she look to the ways of her household.

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BALL BROTHERS COMPANY
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CANNING BY THE JAR-COOKED METHOD IN THE HOT WATER BATH
THE housekeeper of today has a bigger responsibility than her predecessor of a generation or two ago. Upon her shoulders rests the burden of keeping her family in good health through the right choice and preparation of food. In past years she was content to furnish quantities of dishes of delicious flavor and to see her family eat their fill. If illness came she sent for the doctor and did her part by devoted nursing.

Today the housewife must maintain not only the reputation of being a good cook, but she must also take the responsibility of selecting food which will provide proper materials for the growth of the children and promote the health of each member of her family. Doctors and health specialists tell us that the tired feeling, the so-called “spring fever” at the end of winter, is often due to lack of fruits and vegetables in the winter diet. Our newer knowledge of nutrition has caused us to realize more clearly the body’s need for iron, phosphorus, lime, cellulose and vitamins. These essential substances are probably more generally distributed in fruits and vegetables than in any other class of food.

Home Canning is the best means of providing a sufficient supply of these foods during the winter months in localities where fruit and vegetable markets are not easily accessible or the price of fresh products is prohibitive to the family income. The summer vegetable garden can be easily transformed into a “winter garden” by planting for a surplus of vegetables to be canned for the months when the garden does not produce. For those who do not have gardens and orchards the farmers’ road-side stands and home markets afford excellent opportunity to buy fresh fruit and vegetables, in season, at surprisingly low cost. Canning “in season” saves money, labor, time and energy “out of season.”

Home Canning has been simplified and made much easier since the introduction of Jar Cooked (Hot and Cold Pack) and Oven Methods of canning. By careful planning and by following the instructions given in each individual recipe as well as a thorough reading of pages 4 to 8 you can, with minimum effort, have on your pantry shelves a generous supply of delicious home canned fruits, vegetables, meats, fruit juices, preserves and pickles in sufficient variety to insure well-balanced, steaming hot, home cooked meals at a few moments’ notice.

Better health, better work, better sleep, better play can result only from having wholesome, simple, well-balanced meals, with at least one vegetable and one fruit for each member of the family for each day on the housekeeping calendar.
SUCCESSFUL Home Canning depends largely upon the efficiency and type of equipment used as well as following the correct methods. Before starting canning see Methods of Canning and Important Rules on pages 6 to 8. Canning equipment need not be elaborate or expensive. It should be easy to handle, of convenient size, serviceable, light in weight and easy to clean.

• Types of Canners

The type of Canner used depends upon the product to be canned. A large preserving kettle can be used for preserves, conserves, marmalades and jams since these require cooking in an open kettle. For fruits, vegetables and meats, which are canned by the Jar-Cooked (Hot or Cold Pack) method in which the product is cooked inside of the jar, another type of Canner is necessary.

• Hot-Water Bath

This may consist of any container which can be fitted with a suitable rack for holding jars and which allows for a free circulation of boiling water under and around the jars. It should be equipped with a tight-fitting lid and the container should be deep enough to permit one inch of water to cover the jars. A tin lard-pail or wash-boiler can be easily converted into a Water-Bath Canner. The Commercial Water-Bath Canner is fitted with a wire rack, equipped with handles for lifting the jars in and out of boiling water. It is inexpensive and serviceable.

In a Hot-Water Bath Canner the product is processed at boiling temperature.

• Steam Cooker

While the Steam Cooker or “Steamer” is primarily intended for cooking purposes, it can be economically and readily used for fruit canning and preserving.

It is equipped with a tank in which boiling water generates steam which circulates throughout the Cooker. The temperature of the Steamer may never reach that of boiling water. Therefore, the time of processing, as given in the Hot-Water Bath time tables should be increased in accordance with directions issued by the manufacturer of the Cooker when the Steamer is used for canning. Fruits and tomatoes, which do not require long-period cooking and temperatures above boiling point can be successfully canned in the Steam Cooker. The Steam Cooker requires only one burner and contains shelves for holding jars. It is thus economical of both space and fuel.

• Steam Pressure Cooker

The Steam Pressure Cooker consists of an iron or aluminum container equipped with a tight-fitting lid fastened into position with bolts or lugs. It is further equipped with a pressure gauge for determining the steam pressure inside of the cooker and indicating the corresponding temperature. It also contains a safety valve, steam pet-cock and rack for holding jars.

The Steam Pressure Cooker is constructed to obtain and hold temperatures above boiling point, thus reducing the time for processing. U. S. Dept. of Can for economy and health
Agriculture recommends that Meats and Non-Acid Vegetables be processed in Steam Pressure Cooker. Explicit directions for using the Steam Pressure Cooker for canning are supplied with the cooker at the time of purchase.

- **Small Canning Equipment**

  Results can be made more certain and the work greatly lessened by having at hand an ample supply of the smaller less-expensive canning equipment.

  For efficient canning, sharp knives are necessary. A stainless steel or silver knife is best for paring fruit. A long-handled spoon makes stirring easier. A flat wooden spatula or paddle helps in packing. A fine-mesh wire basket or colander simplifies the blanching process. A jar lifter helps to prevent burns. A wide-mouthed funnel and ladle will save time and product when filling jars. A quart measure, small measuring cups, scales, a confectioner’s thermometer and bowls of various sizes help to obtain a perfect product. Enamel or aluminum utensils are preferable.

- **Rubber Jar Rings**

  Success in keeping products canned in Glass Jars depends greatly upon the Jar Ring.

  The purpose of the Jar Ring is to make an air-tight seal between the lid and the jar. It also serves as a cushion and filler between the lid and sealing-edge of the jar. A Jar Ring of good quality is necessary for canning products which require long periods of processing at boiling or higher temperatures. It should fit snugly to the neck of the jar throughout the entire processing period and fully seal the lid to the jar. A ring of inferior quality will “blow out” between the top of the jar and cover. This requires removal of the lid and placing on a new jar ring, which means not only doubling the price of the rubber, but offers an opportunity for spoilage, as air enters the jar while the old ring is being replaced by a new one. A good Jar Ring should be pliable; it should not break or crack. A Jar Ring, to be of correct thickness, should measure 1/12 of an inch. Two rings placed on a jar, because of the added thickness, does not insure a perfect seal on either the Ball Mason or Ideal jar. Old jar rings should not be used for canning. To insure a perfect seal always use NEW, CLEAN, RELIABLE Rubber Rings.

- **Glass Jars**

  Recent inventions and improved methods in the manufacture of Glass Jars now make it possible for the Home-maker to select the jar she likes best from a variety of sizes, shapes and types, all of which are designed and tested to meet her special needs for Home Canning.

  BALL Fruit Jars are made in both round and square shape and in two colors, green glass and white (flint) glass. Color does not indicate the strength of the glass jar; color is merely a matter of choice.

  Flint glass is preferable for some products when canning for sale or for exhibit purposes. Green cucumber pickles, peas, green beans and greens show to better advantage when canned in green glass jars. Green jars are widely used, due to the theory that green glass protects and preserves the delicate color of various fruits. The size of the family should determine the size of the jar. Half-pint jars are recommended for jams, conserves, preserves and marmalades, in place of jelly glasses which are not designed to insure an airtight seal.

- **The Ball “Perfect Mason” Jar**

  The Mason Jar, which is best known to the average home canner is made in both green and flint glass and in round and square shape. It is equipped with a screw cap or lid. The lid is made of metal, preferably zinc, containing a porcelain liner, which fits into the top of cap. In this way the product inside of the jar does not come in contact with the metal part of the cap.

- **Ball “Ideal” and “Eclipse” Glass-Top Jars**

  The Glass-top Jar or Clamp-top Jar is made entirely of glass, with exception of the wire bail or clamp, which fastens the glass lid into position. Glass-top Jars are made in both green and flint glass and in round and square shape.

- **Tightening Wires of “Ideal” and “Eclipse” Jars**

  After continued use the upper wire clamps on these Jars may need to be tightened. To do this slip upper wire (the one that goes over Lid of Jar) out of wire loops. Grasp wire as shown in illustration, bend center of wire down slightly so it will hold Glass Lid more tightly. If in making this bend the ends of the wire are separated too far apart, bend them towards each other so they may be sprung to place in the loops.

Read important rules on page 8
METHODS OF CANNING

It has been said that no single discovery has contributed more to the general welfare of mankind than the art of preserving food. This is now possible in every home through the use of BALL Jars, Caps, Rubbers and Jelly Glasses. Practically all foods may be canned and stored indefinitely without losing their flavor or food value; thus home canning as an applied household science has become a well established, successful, easy and economical home practice. Fruits, vegetables and meats vary in composition and experience has proven they require different methods of canning. All Methods fall in two broad divisions, namely, Open-Kettle and Jar-Cooked (Hot and Cold Pack) Methods.

• Open-Kettle Method

The Open-Kettle Method is that in which the food is cooked in an open kettle. It is used for fruits, conserves, jams, marmalades, preserves and tomatoes.

Careful attention should be given to each step in the process. Use firm, clean, fresh and sound fruits and tomatoes. Boil for required length of time. While fruit is boiling wash Jars, Caps, Lids and Rubbers and put in pan of hot water on fire. Allow water to boil so they will be sterilized. Keep in hot water until ready to use then place WET Rubbers on the hot Jars. See that the Rubbers rest flat on the sealing shoulder. Have shoulder of the Jar, Cap or Lid as well as the Rubber WET when seal is made. Fill Jars to overflowing quickly with boiling fruit or tomatoes. Do not wipe off the top or sealing shoulder of the Jars. Fully seal the Jars as soon as filled. (With Mason Jar screw Cap down tight as possible. With Ideal Jar place upper clamp in position over Glass Lid and pull down lower clamp). Cool as quickly as possible to room temperature. When cool, test for leaks. (See instructions for Jar-Cooked Method). Do not attempt to tighten Mason Caps after Jars are cold—this may break the seal. Store in cool, dry place. (For amount of sugar and time for cooking consult individual recipes and chapters on fruits, jams, marmalades and conserves).

• Oven Canning

Oven canning is indorsed as a satisfactory method of canning if directions are followed and proper temperature used. A great many of the newer stoves are equipped with oven regulators. However, if your stove is not so equipped you can purchase an oven thermometer at very small cost which will enable you to determine the temperature inside of the oven. Always pre-heat oven before using for canning.

• Cold Pack (Jar-Cooked) Method

The term “Cold Pack” came into existence several years ago when it was found after proper preparation that food could be packed cold into Jars and processed in a hot water bath or pressure cooker. This method required that fruits and vegetables needed to be “blanched” in hot water and “dipped” into cold water. Boiling syrup or boiling water was added but even then the temperature of the food was considerably lower than boiling when placed in canner for processing or sterilizing. The disadvantage of this method was the large amount of water needed for blanching and cold dipping. In homes where water was not available this was a serious handicap so the scientists kept on working to find an easier, more simple and satisfactory way to can fruits, vegetables and meats. As a result we now have an ideal method of canning known as:

• The Hot Pack (Jar-Cooked) Method

The Hot-Pack Method has many advantages but no disadvantages. The product is processed in the Jar just as in the Cold-Pack Method. In the Hot-Pack Method a short cooking of the food is substituted for the blanching and cold dip in the Cold-Pack Method. It was thought the shock of cold dipping killed all bacteria, but this has been proved to have no scientific basis. Pre-cooking is easily done. The food is simply heated in small quantities of liquid until it boils. The food is thoroughly shrunked so as to facilitate packing and any enclosed air is driven out. The boiling hot food is then packed into Jars and processed immediately. Jars so packed may be sealed completely before they are put in hot water bath or steamer. Only partly seal Jars that are to be processed in steam pressure cooker or oven. If Mason Jars are sealed before processing, the Caps should be screwed down as tight as possible immediately after removing from cooker. Do not attempt to tighten Mason Caps after the Jars are cold—this may break the seal.

GENERAL DIRECTIONS FOR JAR-COOKED (HOT AND COLD PACK) METHODS OF CANNING

(1) Wash Jars, Caps and Rubbers in clean hot water. Let them stand in hot water until ready to use.

(2) Carefully examine old Jars and Caps and see that the sealing edges of Caps or Lids are not dented or chipped.

(3) Select FIRM, SOUND, FRESH Products. Reject any bruised and spoiled fruits, vegetables and meats. Sort and grade for size and ripeness. Uniformity helps to secure an even distribution of heat throughout the Jar and improves the appearance of the pack.

(4) Clean product thoroughly before canning.

(5) Place new WET Rubber in position on Jar and see that it rests flat on the sealing shoulder.
(6) Pre-Cook (Boil) for time given in Time Table. Blanch (Scald) then cold dip Peaches, Apricots, Tomatoes, Beets and Carrots to loosen skins.

(7) Pack product into Jars loosely enough to allow for proper heat circulation; vegetables loosely enough so they will retain their shape.

(8) For FRUIT, pack the prepared fruit into clean hot BALL Jars. Do not crush. Fill with boiling syrup to within one-half inch of top of Jar to allow for expansion of air and to prevent boiling over.

(9) For VEGETABLES, Pre-Cook (Boil). (See Time Table.) Pack prepared vegetables into clean hot BALL Jars; add one level teaspoon pure salt to each quart. Fill Jar with the boiling water in which the vegetable was cooked, to within one-half inch of top of Jar. If not enough cooking water add boiling water.

(10) For MEATS, bleed well and cool thoroughly before using. Pack meat uncooked (raw) or cooked, into clean hot BALL Jars. If canning raw meat add two level teaspoons pure salt to each quart. Do not add water. If canning cooked meat add one level teaspoon pure salt to each quart if it has not been seasoned in cooking. Add the liquid or gravy in which the meat was cooked.

(11) Cold Pack—Partly seal by screwing down the Cap on Mason Jar until it touches the Rubber Ring, but do not fully seal—On IDEAL Jar, place Glass Lid and WET Rubber in position, click the top bail into position, but leave lower bail up while processing. At the end of the processing period remove Jars from the canner, one at a time, and seal immediately. (See paragraph 12.)

(12) Hot Pack—Prepare JARS and MATERIAL as directed above. Pre-Cook (Boil, Sear or Roast) material. Fill Jars with BOILING material. If using Steam Pressure Cooker or Oven, partly seal as directed in paragraph 11. If using the Hot-Water Bath or Steamer, completely seal. To seal BALL Mason and Special Jars screw Cap down on the Rubber as tightly as possible. To seal BALL Ideal and Eclipse Jars pull down lower clamp. At end of processing period remove Jars from the canner, one at a time, and seal immediately. (See paragraph 12.)

(13) **Processing**

HOT WATER BATH: Have water in canner hot. Place Jars in slowly. Cover and keep at least one inch of water over tops of Jars. Begin counting time when the water is in a hard boil. Keep boiling steadily during the entire processing period. When processing time is over, remove Jars from canner and seal immediately.

STEAM COOKER: Fill reservoir with water and keep filled with boiling water during the processing period. Place Jars on rack. Begin counting processing time after the water has boiled about five minutes. Allow fill the cooking compartments with steam and bring the temperature to that of boiling water. Remove Jars at end of processing period and seal immediately.

STEAM PRESSURE COOKER: Put two inches of water in cooker. Place rack in position. Place Jars on rack. Place top on cooker and fasten securely. Leave pet-cock open. When live steam has escaped for 5 minutes close pet-cock. Begin counting time when the steam gauge shows the required pressure. Regulate fire to hold an even pressure; two pounds variation may draw the liquid out of the Jars. At end of processing period remove cooker from the fire, allow pressure gauge to return to zero. Open pet-cock a little at a time until no more steam escapes. Open cooker, remove Jars, one at a time, and seal immediately.

OVEN: Place the Jars one inch apart in a shallow pan in a pre-heated oven. Do not put water in pan. Place the pan so as to bring Jars as near the center of the oven as possible. When using different size Jars, place pints and half-pints above the quarts. When using an Electric Oven, do not use top heating element. Remove the Jars at end of processing period one at a time and seal immediately.

(14) **Time for Processing**

See individual recipes or Time Table on pages 9, 10 and 11.

**INTERMITTENT METHOD**

In this method the products are properly prepared and packed in Jars and processed for two, three or more periods with intervals of from twelve to twenty hours. Seal at close of first process and keep sealed for the remaining periods.

Because of climatic conditions the intermittent process is recommended by the Extension Service in most of the southern states for non-acid vegetables where pressure cooker is not available.

If using this method consult your Home Demonstration Agent for processing time, number of proceedings necessary and other detailed information.

**Testing Jars**

Allow Jars to stand “top-up” until perfectly cold—Do not attempt to tighten Mason Cap after the Jars are cold—This may break the seal.

After Jars are cold, invert them. Allow them to stand inverted two or three hours, then examine for leaks. If leaks are found, remove the Top, look for cause of leak. If Cap is bent or Lid nicked, replace with good one. Re-process for one-third to one-half of original time and seal again—or material can be used after heating.

It will be well to examine Jars four or five days after sealing to make sure they are perfectly sealed.

**Opening Jars**

Pull Rubber from beneath the Cap with fingers or pliers; if it sticks too tightly, immerse the Top in hot water; if hot water is not available, press knife blade between the Jar and Rubber admitting air to break the seal. (Do not press knife blade between Cap and Rubber—this may dent the sealing edge of the Cap.)

THOROUGHLY REHEAT CANNED VEGETABLES AND MEATS BEFORE USING. IF VEGETABLES ARE TO BE USED FOR SALAD, ALLOW THEM TO COOL AFTER HEATING.
Selection of Products

Always select fresh, sound, firm products for canning. Spoiled or decayed products should never be used.

For making jams and jellies, imperfectly shaped or hard fruit may be used. Bruised or speckled fruit may also be used if the bruises and specks are carefully removed and only the sound portions of the fruit are reserved for the preserving kettle.

Blanching

Blanching consists of plunging products, such as Peaches, Apricots, Tomatoes, Beets and Carrots into boiling water for a short time. The purpose is to shrink the product and loosen the skins.

Cold Dip

Blanching is usually followed by the Cold Dip. This consists of plunging the blanched product into cold or running water for 5 or 10 seconds. The purpose of the Cold Dip is to make easier handling.

Pre-Cooking

Pre-cooking consists of cooking the product by boiling, steaming, or searing. It is recommended for most vegetables, as it improves the texture and flavor; shrinks the product and insures a better pack; reduces the time required for heat to penetrate throughout the contents of the Jars.

Processing or Sterilizing

Processing consists of applying heat to the Jar and its contents so that the product will keep. It is sometimes called sterilizing.

Storage

Store Jars in a cool, dry place where there is no danger from freezing or over-heating.

IMPORTANT RULES FOR SUCCESSFUL CANNING

1—BEGIN COUNTING TIME in the Hot-Water Bath after the water is boiling. Keep the water boiling vigorously during the entire processing period.

2—PREVENT LOSS OF LIQUID in Hot-Water Bath by: Having and keeping water 1 inch over tops of Jars. Keeping the water boiling vigorously over the tops of Jars during entire processing period. Completely sealing the Jars (if filled with boiling hot material) before processing.

3—LOSS OF LIQUID in STEAM PRESSURE COOKER can be prevented by: Maintaining an even temperature and pressure throughout the entire processing period. Allowing the indicator on pressure gauge to return to 0° before opening pet-cock to release the remaining steam. Open pet-cock gradually.

4—NEVER OPEN JARS to refill with liquid. Loss of liquid does not affect the keeping quality if the Jar is sealed. If the Jar Ring has “blown out” the Ring must be replaced immediately with a new one, seal and process the product again from 10 to 15 minutes.

5—SATISFACTORY RESULTS in CANNING VEGETABLES WILL BE ASSURED BY: Using fresh, sound, firm products. Pre-cooking consists of cooking the product by boiling, steaming, or searing. Pre-cooking consists of cooking the product by boiling, steaming, or searing. Canning the product while it is still fresh. Putting each Jar into processing vessel as soon as packed. Process for time specified. Completely sealing the Jar as soon as taken from processing vessel. Canning the product while it is still fresh.

6—CORN, BEANS, and LIMA BEANS EXPAND during the processing period. Pack loosely to within 1 inch of top of Jar to allow for this expansion. Other products SHRINK, and the Jar can be filled to within ¾ inch of top of Jar in Jar. Cooked canning insures a quicker seal than by filling Jar to overflowing with liquid.

7—CLOUDINESS IN PEAS can be prevented by: Using young, unbruised peas. By using soft water for blanching. Hard water contains various mineral elements which may affect the color of certain vegetables (peas and beets).

8—SUGARLESS CANNING is not economical. The addition of sugar during the cooking helps to develop the flavor of the fruit. Adding sugar at the time the fruit is used requires extra time and labor, and the quality and flavor of the fruit are not so satisfactory as when sugar has been added when canning. The increased cost per Jar of fruit because of any increase in price of sugar is very slight, only a fraction of a cent. The price of sugar should therefore not determine whether to put up fruit or not.

9—CANNING COMPOUNDS, or other chemical preservatives may be injurious to health. It is advisable to rely upon heat for sterilization as given in the BALL Blue Book directions and recipes. Directions and recipes for canning in the BALL Blue Book do not require the use of canning compounds.

10—IT IS UNWISE to SUBJECT JARS TO SUDDEN TEMPERATURE CHANGES. In taking Jars from cool basement clean them first and can be used year after year. A clean Glass Jar is the last word in sanitation and chemical reaction between the product and container is impossible.

Can fruits for winter use
# Canning Time Table for Standard Fruits

<table>
<thead>
<tr>
<th>Product</th>
<th>Method of Treatment before Canning</th>
<th>Hot-Water Bath Boiling (minutes)</th>
<th>Oven 275° F. (minutes)</th>
<th>Syrup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>Wash—quarter or halve—place in salt bath—boil 1 minute—pack—cover with boiling syrup. Or—Boil whole in syrup or bake as for serving, and cover with syrup—pack hot. Or—Pack hot in form of apple sauce.</td>
<td>15</td>
<td>35</td>
<td>Medium</td>
</tr>
<tr>
<td>Apricots</td>
<td>Wipe with damp cloth—do not peel—halve and pit—blanch—pack—cover with boiling syrup.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berries</td>
<td>Wash—stem—pack in jars—cover with boiling syrup. Or pre-cook and pack hot</td>
<td>20</td>
<td>35</td>
<td>Medium</td>
</tr>
<tr>
<td>Cherries</td>
<td>Wash—stem—pit—pack—cover with boiling syrup. Or remove pits, add sugar as desired, bring to boil and pack</td>
<td>20</td>
<td>30</td>
<td>Medium</td>
</tr>
<tr>
<td>Currants</td>
<td>Wash—stem—pack in jars—cover with boiling syrup. Or pre-cook and pack hot</td>
<td>20</td>
<td>30</td>
<td>Medium</td>
</tr>
<tr>
<td>Figs</td>
<td>Wash—place in soda bath—drain—rinse—cover with boiling syrup.</td>
<td>20</td>
<td>35</td>
<td>Medium</td>
</tr>
<tr>
<td>Gooseberries</td>
<td>Same as other berries.</td>
<td>20</td>
<td>30</td>
<td>Medium</td>
</tr>
<tr>
<td>Grapes</td>
<td>Same as berries.</td>
<td>20</td>
<td>30</td>
<td>Medium</td>
</tr>
<tr>
<td>Peaches</td>
<td>Select firm, ripe peaches—blanch—cold-dip—peel—pack—cover with boiling syrup.</td>
<td>20</td>
<td>35</td>
<td>Medium</td>
</tr>
<tr>
<td>Pears</td>
<td>Select slightly under-ripe pears—pare—quarter—place in cold salt bath—boil in syrup—pack—cover with boiling syrup.</td>
<td>20</td>
<td>35</td>
<td>Medium</td>
</tr>
<tr>
<td>Pineapple</td>
<td>Peel—remove eyes—cut, slice or shred—pack cold—cover with boiling syrup.</td>
<td>30</td>
<td>45</td>
<td>Medium</td>
</tr>
<tr>
<td>Plums</td>
<td>Wash—prick skins—pack cold—cover with boiling syrup. Or bring to boil, using sugar as desired—pack hot into jars</td>
<td>20</td>
<td>45</td>
<td>Medium</td>
</tr>
<tr>
<td>Rhubarb</td>
<td>Wash—cut into small pieces—pack—cover with boiling syrup.</td>
<td>20</td>
<td>30</td>
<td>Medium</td>
</tr>
<tr>
<td>Strawberries</td>
<td>Wash—stem—pack—cover with syrup let remain in syrup several hours—re-heat—fill jars seal. Or to each quart add 1 cup sugar and 2 tablespoons of water. Boil slowly 15 minutes. Let stand over night in the kettle. Re-heat to boil—fill jars hot.</td>
<td>20</td>
<td>35</td>
<td>Medium</td>
</tr>
<tr>
<td>Fruit Juices</td>
<td>Crush fruit—heat slowly—strain—pour into jars (180° F.)</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Notes on Time Tables for Fruits

These time periods are based on the use of QUART GLASS Jars. For Half Pints and Pints reduce processing time 5%. For Half Gallon Jars add 20% to time as above specified.

Residents of Mountain States may shorten processing time by consulting their State Extension Service for salt water proportions for Hot-Water Bath.

If Steam Pressure Cooker is used for fruits, process 15 minutes at 5 pounds pressure.

TEMPERATURES higher than boiling tend to injure the delicate color and texture of most fruits.

For altitudes above 1000 feet increase the time for processing (sterilization) 20% for each additional 1000 feet.

Cover jars with 1 inch of water in Hot-Water Bath. Begin counting time for processing when water is boiling. Fill jar with BOILING syrup to within ¼ to ½ inch of top. See next page for Syrup Tables.

Using Ball Jars reduces living costs
Canning Time Table for Standard Vegetables
(Consult Individual Recipe for Unusual Vegetables and Combinations)

<table>
<thead>
<tr>
<th>Product</th>
<th>Method of Treatment before Canning</th>
<th>Hot-Water Bath Boiling (hours)</th>
<th>Steam Pressure Cooker 10 pounds (minutes)</th>
<th>Oven (275°F.) (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus</td>
<td>Wash—tie in bundles—keep tips above water—boil 5 minutes—pack</td>
<td>3</td>
<td>40</td>
<td>3</td>
</tr>
<tr>
<td>Beans—Green or Wax</td>
<td>Wash—string—boil 5 minutes—pack.</td>
<td>3</td>
<td>40</td>
<td>3</td>
</tr>
<tr>
<td>Beans—Lima</td>
<td>Shell—grade—boil 5 to 10 minutes—pack loosely</td>
<td>3</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Beets</td>
<td>Wash—retain 1 inch stems—boil 15 minutes—slip skins—pack.</td>
<td>2</td>
<td>40</td>
<td>2½</td>
</tr>
<tr>
<td>Brussels Sprouts</td>
<td>Wash—boil 10 minutes—add salt—pack</td>
<td>1½</td>
<td>40</td>
<td>2½</td>
</tr>
<tr>
<td>Cabbage</td>
<td>Steam in covered vessel for 15 minutes or until wilted—use smallest possible amount of water—loosely pack</td>
<td>3</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>Soak in cold brine—boil 3 minutes—pack.</td>
<td>1½</td>
<td>40</td>
<td>2½</td>
</tr>
<tr>
<td>Carrots</td>
<td>Wash—boil 15 minutes—skin—pack.</td>
<td>2</td>
<td>45</td>
<td>2½</td>
</tr>
<tr>
<td>Corn (on Cob)</td>
<td>Boil on cob 5 minutes—pack.</td>
<td>3</td>
<td>90</td>
<td>3</td>
</tr>
<tr>
<td>Corn</td>
<td>Boil on cob 5 minutes—cut from cob—loosely pack</td>
<td>3</td>
<td>90</td>
<td>3</td>
</tr>
<tr>
<td>Corn and Lima Beans</td>
<td>Boil each product 5 minutes—combine corn and beans—loosely pack</td>
<td>3</td>
<td>90</td>
<td>3</td>
</tr>
<tr>
<td>Eggplant</td>
<td>Peel—cut into ¼ to ½-inch slices—boil 3 minutes—pack—do not add salt</td>
<td>2½</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Greens (Including Spinach)</td>
<td>Steam in covered vessel for 15 minutes or until wilted—use smallest possible amount of water</td>
<td>3</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>Kohlrabi and Turnips</td>
<td>Wash—boil 15 minutes—slice—pack.</td>
<td>2</td>
<td>45</td>
<td>2½</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>Wash—skin if necessary—boil 3 minutes—pack</td>
<td>3</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Okra</td>
<td>Wash—remove cap—boil 3 minutes—pack</td>
<td>2</td>
<td>30</td>
<td>2½</td>
</tr>
<tr>
<td>Parsnips</td>
<td>Wash—scrub—boil 15 minutes—pack.</td>
<td>2</td>
<td>45</td>
<td>2½</td>
</tr>
<tr>
<td>Peas</td>
<td>Shell—grade—boil 3 to 5 minutes—loosely pack</td>
<td>3</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Peppers, Bell</td>
<td>Wash—remove seed-pod—boil 5 minutes—flatten—pack</td>
<td>¾</td>
<td>15</td>
<td>1¼</td>
</tr>
<tr>
<td>Peppers, Pimiento</td>
<td>Wash—place in moderately hot oven until skins blister or crack—slip skins—remove seed-pod—pack dry</td>
<td>¾</td>
<td>15</td>
<td>1¼</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>Wash—cut into pieces—cook until tender—mash—pack.</td>
<td>3</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>Sauerkraut</td>
<td>Pack—add no water or salt.</td>
<td>1</td>
<td>40</td>
<td>2½</td>
</tr>
<tr>
<td>Squash</td>
<td>Wash—cut into pieces—cook until tender—mash—pack.</td>
<td>3</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>Sweet Potato</td>
<td>Wash—boil or steam 15 minutes—peel—pack.</td>
<td>3</td>
<td>90</td>
<td>3</td>
</tr>
<tr>
<td>Tomato</td>
<td>Scald and peel—pack whole or cut into pieces—pack.</td>
<td>½</td>
<td>15</td>
<td>¾ at 5 pounds</td>
</tr>
</tbody>
</table>

Syrup Table for Fruits

<table>
<thead>
<tr>
<th>Syrup</th>
<th>Proportions Sugar and Water</th>
<th>Directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thin Syrup</td>
<td>1 part sugar to 3 parts water</td>
<td>Boil sugar and water together until sugar is dissolved.</td>
</tr>
<tr>
<td>Medium Syrup</td>
<td>1 part sugar to 2 parts water</td>
<td>Fruit juice may be used in place of water.</td>
</tr>
<tr>
<td>Thick Syrup</td>
<td>1 part sugar to 1 part water</td>
<td></td>
</tr>
</tbody>
</table>
### Canning Time Table for Meats, Poultry, Fish

<table>
<thead>
<tr>
<th>Product</th>
<th>Method of Treatment before Canning</th>
<th>Hot-Water Bath Boiling One-Period (hours)</th>
<th>Steam Pressure Cooker 10 pounds (hours)</th>
<th>Oven 275° F. (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meats</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lamb</td>
<td>Bleed well—thoroughly cool—pre-cook or pack raw—include small bones—process</td>
<td>3</td>
<td>1½</td>
<td>3½</td>
</tr>
<tr>
<td>Veal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pork</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Bleed well—thoroughly cool—pre-cook or pack raw—include small bones—process</td>
<td>3</td>
<td>1½</td>
<td>3½</td>
</tr>
<tr>
<td>Duck</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild Game</td>
<td>Bleed well—thoroughly cool—soak in brine 30 minutes—pre-cook or pack raw—process</td>
<td>3</td>
<td>1½</td>
<td>3½</td>
</tr>
<tr>
<td>Deer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rabbit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild Birds</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grouse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duck</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pheasant, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh Water</td>
<td>Use only fresh fish—bleed well—soak in brine—pre-cook or pack raw—process</td>
<td>3</td>
<td>1½</td>
<td>3½</td>
</tr>
<tr>
<td>Salt Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Canning Time Table for Soups

<table>
<thead>
<tr>
<th>Product</th>
<th>Method of Treatment before Canning</th>
<th>Hot-Water Bath Boiling One-Period (hours)</th>
<th>Steam Pressure Cooker 10 pounds (hours)</th>
<th>Oven 275° F. (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus Puree</td>
<td>Use tough ends—boil until soft—press through sieve—add seasoning—pack hot—process</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Clam Broth</td>
<td>Use fresh clams—boil 10 minutes—add seasoning—pack hot—process</td>
<td>3</td>
<td>1½</td>
<td>3</td>
</tr>
<tr>
<td>Clam Chowder</td>
<td>Boil mixture 10 minutes—pack hot—process</td>
<td>3</td>
<td>1½</td>
<td>3</td>
</tr>
<tr>
<td>Fish Chowder</td>
<td>Boil mixture 20 minutes—pack hot—process</td>
<td>3</td>
<td>1½</td>
<td>3</td>
</tr>
<tr>
<td>Green Pea Puree</td>
<td>Boil peas 1 hour—press through sieve—add salt—pack hot—process</td>
<td>3</td>
<td>1½</td>
<td>3</td>
</tr>
<tr>
<td>Soup Stock</td>
<td>Cover meat with cold water—simmer 6 hours—add seasoning—cool—re-heat—pack hot—process</td>
<td>3</td>
<td>1½</td>
<td>3</td>
</tr>
<tr>
<td>Vegetable Soup</td>
<td>Boil vegetables—pack hot—add salt—process</td>
<td>3</td>
<td>1½</td>
<td>3</td>
</tr>
<tr>
<td>Mixture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomato Pulp</td>
<td>Blanch tomatoes—cook 30 minutes—pack hot—add salt—process</td>
<td>¾</td>
<td>½</td>
<td>¾</td>
</tr>
</tbody>
</table>

### Notes on Time Tables for Meats and Vegetables

Pack vegetables as hot as possible. Add 1 level teaspoon salt to 1 quart vegetables unless otherwise specified. Brine used for canning vegetables is made of 2½ ounces salt to 1 gallon water, or 1 level teaspoon salt for each quart of vegetables. Add 2 level teaspoons salt to 1 quart meat. Add 1 tablespoon sugar, if desired, to corn and peas. For vegetables which are especially difficult to can, 1 tablespoon vinegar or 1 tablespoon lemon juice may be added to each quart. Place jar in Canner immediately after packing. In HOT-WATER BATH, cover jars with 1 inch water. Begin counting time for Processing when water begins to BOIL vigorously.

Process for REQUIRED length of time. (See Time Table.) For altitudes above 1000 feet increase the time for PROCESSING (Sterilization) 20% for each additional 1000 feet. Reject any product which, upon opening, looks suspicious, or contains any “flat sour,” or unnatural odors. Do not taste. Thoroughly RE-HEAT all canned Vegetables and Meats before using. Directions for Canning, as given in the Ball Blue Book, do not require the use of canning compounds, chemicals or preserving powders. BALL BLUE BOOK recipes call for LEVEL measurements.
Approximate Yield

## Approximate Yield of Vegetables—From 50-foot Row

<table>
<thead>
<tr>
<th>Product</th>
<th>Amount</th>
<th>Product</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asparagus</td>
<td>40 pounds</td>
<td>Dandelions</td>
<td>1-2 bushels</td>
</tr>
<tr>
<td>Beans</td>
<td></td>
<td>Lettuce</td>
<td>50 plants</td>
</tr>
<tr>
<td>String</td>
<td>½ bushel</td>
<td>Leaf</td>
<td>30 plants</td>
</tr>
<tr>
<td>Lima</td>
<td>½ bushel (not shelled)</td>
<td>Head</td>
<td>1-2 bushels</td>
</tr>
<tr>
<td>Beets</td>
<td></td>
<td>Onions</td>
<td>1 bushel</td>
</tr>
<tr>
<td>For beet tops</td>
<td>½ bushel</td>
<td>Parsnips</td>
<td>1 bushel</td>
</tr>
<tr>
<td>For baby beets</td>
<td>½ bushel</td>
<td>Peas</td>
<td>1 bushel</td>
</tr>
<tr>
<td>For storing</td>
<td>1 bushel</td>
<td>Potatoes</td>
<td>1 bushel</td>
</tr>
<tr>
<td>Cabbage</td>
<td>60-70 pounds</td>
<td>Rhubarb</td>
<td>30-50 pounds</td>
</tr>
<tr>
<td>Carrots</td>
<td>1 bushel</td>
<td>Rutabagas</td>
<td>1-1½ bushels</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>10-15 heads</td>
<td>Spinach</td>
<td>1 bushel</td>
</tr>
<tr>
<td>Celery</td>
<td>100 plants</td>
<td>New Zealand</td>
<td>1-2 bushels</td>
</tr>
<tr>
<td>Chard</td>
<td>25-30 pounds</td>
<td>Hubbard</td>
<td>10-30 pounds</td>
</tr>
<tr>
<td>Corn</td>
<td></td>
<td>Summer</td>
<td>20 pounds</td>
</tr>
<tr>
<td>Golden Bantam</td>
<td>6 dozen</td>
<td>Tomatoes</td>
<td>2-3 bushels</td>
</tr>
<tr>
<td>Country Gentleman</td>
<td>6 dozen</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Approximate Amount of Fruits and Vegetables

<table>
<thead>
<tr>
<th>Fresh Product</th>
<th>Canned in Quart Jar</th>
<th>Fresh Product</th>
<th>Canned in Quart Jar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1½ quart plums</td>
<td>1</td>
<td>2 pounds string beans</td>
<td>1</td>
</tr>
<tr>
<td>1¼ quart blackberries</td>
<td>1</td>
<td>2 pounds lima beans, shelled</td>
<td>1</td>
</tr>
<tr>
<td>1¼ quart red raspberries</td>
<td>1</td>
<td>30 to 40 small beets</td>
<td>1</td>
</tr>
<tr>
<td>1½ quart cherries</td>
<td>1</td>
<td>30 to 40 small carrots</td>
<td>1</td>
</tr>
<tr>
<td>2 quarts strawberries</td>
<td>1</td>
<td>3 small ears sweet-corn</td>
<td>1</td>
</tr>
<tr>
<td>1½ quart tomatoes</td>
<td>1</td>
<td>1 bushel apples</td>
<td>20</td>
</tr>
<tr>
<td>2 quarts peas (in pods)</td>
<td>1</td>
<td>1 bushel peas</td>
<td>18</td>
</tr>
<tr>
<td>3 pounds spinach</td>
<td>1</td>
<td>1 bushel pears</td>
<td>30</td>
</tr>
<tr>
<td>2 pounds chard</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Practical Uses for Fruit Jars

- **Home Purposes**
  - Home canning of fruits, vegetables, soups, meats, sea-food and wild game.
  - Packing and storage of jams, conserves, preserves, marmalades, pickles, syrups, honey and fruit juices.
  - For storage of salted and brined products.
  - For storage of salt, sugar, spices, starches, flours, cereals, coffee, tea, bread crumbs, nuts, etc.
  - Packing lard, butter, salad-dressing and chocolate.
  - As a container for carrying beverages for school lunches, etc.
  - For cider, vinegar and all beverages.
  - Cream whipper. Clothes sprinkler.
  - Packing and storage of cheese.
  - Storage of dried fruits, dried vegetables, dried meats, sea-food and wild game.
  - For storing lemons—(pack raw, cover with cold water and seal).

- **Educational Purposes**
  - Storage, exhibit and classification of all kinds of seeds and grains. Preserving plant exhibits.
  - For soil exhibits, classifications of soils for laboratory work.
  - For storage of laboratory cultures, studies and specimens.
  - For chemical, zoological and technical exhibits to be used at county, state and national exhibitions.
  - For educational exhibits showing samples of industrial exhibits, such as wool, linen, silk, cotton—showing development from the raw material to the finished product.
  - For stone and jewel exhibits.

- **Industrial Purposes**
  - For use as containers in exhibiting samples of groceries—cereals, coffees, teas, vegetables and nuts in grocery stores, jobbing houses and wholesale departments.
  - For exhibition of nails, tacks, staples, screws, nuts, bolts and many other small articles in hardware stores.
  - As drinking fountains for poultry.
  - Handy containers for measuring oil for automobiles in gasoline filling stations.
  - Hand sprayer for garden.
  - Covers for growing plants.

In summer prepare for winter
FRUITS

FRUITS, with their delicious flavor, their rich color, acid contents and their seasonal distribution, offer a greater variety of uses than any product which we can or preserve.

Jellies, jams, marmalades and fruit juices, as well as the plain canned fruit, with syrup just sweet enough to suit the family taste, add a pleasing variety to the monotony of the winter diet.

From these, delicious fruit cocktails can be made which make such an appetizing course with which to start a dinner or luncheon. These fruits may also be used for various desserts such as pies, puddings, ices, ice creams and gelatines. With such additions a simple meal is made most complete and satisfying.

- **Apples (Jar-Cooked)**
  - The late fall and winter varieties are best for canning as they are more tart and retain their flavor better than do the sweet varieties.
  - Select firm, sound, tart varieties, slightly underripe. Wash, pare and core; cut into quarters, or leave whole as desired; drop immediately into a salt bath made in proportion of 1 tablespoon salt to 1 quart water to prevent discoloring. Boil for 1 minute to shrink; pack tight into hot BALL Jars, fill with hot syrup, made with 1 part sugar to 1 part water, partly seal and process in a Hot-Water Bath for 15 minutes. Remove from canner and seal immediately.

- **Apples (Open-Kettle)**
  - Wash, peel, quarter and core the apples. Drop the quarters into boiling syrup made with 1 part sugar to 1 part water and boil until tender. Add the grated yellow rind of 1 lemon for each 2 quarts of apples. Boil the apples a few minutes longer. Pack into hot BALL Jars, fill to overflowing with boiling syrup and seal immediately.

- **Apple Sauce (Open-Kettle)**
  - Wash, pare, core and remove specks or discolored portions. Cut into small pieces to prevent sticking and cook until apples are tender; sweeten if desired. Pack into hot BALL Jars and seal immediately.

- **Apple Sauce (Jar-Cooked)**
  - Prepare and cook fruit as specified for Open-Kettle Method. Pack while hot into hot BALL Jars, partly seal and process in a Hot Water Bath for 15 minutes. Remove from canner and seal immediately.

- **Canned Baked Apple**
  - Wash and core sound, tart, baking apples. Fill the cavities with sugar to which a little cinnamon has been added. Place in a baking dish containing a little water. Bake in a hot oven until tender. Pack quickly into hot BALL Jars and cover with a hot syrup made with 1 part sugar to 1 part water. Partly seal, and Process in a Hot-Water Bath for 20 minutes.

- **Apricots (Jar-Cooked)**
  - Apricots are generally canned with skins on. Clean by wiping with damp cloth. Halve and pit; blanch ½ minute; pack closely into hot BALL Jars;
fill with hot syrup, made with 1 part sugar to 1 part water. Partly seal and process in a Hot-Water Bath for 20 minutes. Remove from canner and seal immediately.

- **Apricots (Open-Kettle)**
  (Same as Peaches)

**BERRIES**

- **Blackberries, Blueberries, Dewberries, Huckleberries, Loganberries, Mulberries, Raspberries.**

Berries contain more water in proportion than large fruits and vegetables. For this reason, in Jar-Cooked canning, berries, when heated, will rise to the top of the jar, while syrup, being heavier, remains at the bottom. This can be remedied somewhat by pre-cooking the berries.

To each pound of berries add one-fourth to one-half pound sugar, according to the sweetness of the fruit. Place in kettle, stir gently and boil for five minutes. Pack boiling hot into BALL Jars and process five minutes in a Hot-Water Bath.

- **Berries (Jar-Cooked)**

  Wash and stem; pack closely in hot BALL Jars; fill with hot syrup made with 3 parts sugar to 2 parts water; partly seal and process in a Hot-Water Bath for 20 minutes. Remove from canner and seal immediately.

- **Berries (Open-Kettle)**

  Wash and pick over carefully. Use ½ to 1 cup of sugar to a quart of berries. Put sugar and fruit in a preserving kettle and let it heat, shaking occasionally to prevent burning. Boil for 5 minutes. Fill hot BALL Jars to overflowing and seal immediately.

- **Strawberries**

  The strawberry is the most delicately colored of all berries. A very high temperature or an extra long period of rapid boiling tends to destroy the coloring matter, making it advisable to process only in a Hot-Water Bath with the water boiling gently. The strawberry contains so much water, that unless it is replaced with syrup, it may rise to the top of the jar when canned by the Jar Cooked method. This does not affect keeping qualities.

- **Strawberries (Jar-Cooked)**

  Select firm, large berries, wash and stem, pack firmly as possible without crushing, into hot BALL Jars, fill with a syrup, made with 3 parts sugar to 2 parts water. Partly seal and process in a Hot-Water Bath for 20 minutes. Remove from canner and seal immediately.

- **Strawberries (Open-Kettle)**

  Wash and seed the cherries, place them in a preserving kettle with enough sugar to sweeten them (but without water). Heat slowly until the boiling point is almost reached. Fill hot BALL Jars to overflowing and seal immediately.

- **Cranberries (Jar-Cooked)**

  Wash and for each quart of fruit add one quart water. Boil until the berries are well broken. Add 2 to 2½ cups of sugar for each quart of berries. Boil rapidly until the juice almost jellies. Pack while hot into hot BALL Jars, partly seal and process in Hot Water Bath for 20 minutes. Remove from canner and seal immediately.

- **Cranberries (Open-Kettle)**

  Prepare and cook fruit as specified in Jar Cooked Method. Fill hot BALL Jars to overflowing and seal immediately.

- **Currants (Jar-Cooked)**

  Wash and stem; pack closely in hot BALL Jars; fill with hot syrup made with 3 parts sugar to 2 parts water; partly seal and process in Hot Water Bath for 20 minutes. Remove from canner and seal immediately.

- **Currants (Open-Kettle)**

  Wash, stem and pick over carefully. Use ¾ to 1 cup of sugar to each quart of currants. Put sugar and fruit in a preserving kettle and let it heat. Shake occasionally to prevent burning. Boil for 5 minutes. Fill hot BALL Jars to overflowing and seal immediately.

- **Elderberries (Jar-Cooked)**

  Wash, stem and pack cold into hot BALL Jars. Fill with syrup made with one part of sugar to three parts of water. Partly seal and process in Hot Water Bath for 16 minutes. Remove from canner and seal immediately. Since Elderberries lack acidity, lemon juice, sour apples or rhubarb are generally used with them when using for pies or sauce.

---

*Insure success in canning; read pages 4 to 8*
• Elderberries (Open-Kettle)
  Wash and place the berries in preserving kettle. Cover with syrup made in the proportion of one cup sugar to three cups of water. Bring to boiling point. Fill hot BALL Jars to overflowing and seal immediately.

• Figs (Jar-Cooked)
  Figs for canning should be sound and firm. Sprinkle 1 cup of soda over 6 quarts of figs and add 4 quarts of boiling water. Allow figs to remain in soda bath for 5 minutes. Drain and rinse thoroughly. Place the figs into 2 quarts of syrup made with 3 parts sugar to 2 parts water and boil gently for 1 hour. Pack the figs carefully into hot BALL Jars and fill with syrup. Partly seal and process for 20 minutes in a Hot-Water Bath. Remove from canner and seal immediately.

• Figs (Fresh) (Open-Kettle)
  Use figs slightly under-ripe. Slit them on one side and soak in cold salt brine for 3 or 4 hours. Then wash thoroughly in cold water. Make a syrup of 1 pound sugar and a pint of water to each pound of fruit. Place syrup in a kettle and when boiling, drop in figs and cook until done. Fill hot BALL Jars to overflowing and seal at once.

• Fruit Macedoine (Jar-Cooked)
  A combination of light colored fruits makes an attractive pack and it is a convenient product to have at hand, since it is ready to serve as fruit cocktail, salad or dessert. For fancy packs the fruit may be packed in alternate layers, or arranged in other attractive designs.
  Pleasing combinations:
  1. Green gage plums, pears, white grapes.
  2. Peaches, pears, blue plums.
  3. Pineapples, kumquats, figs.
  Pack cold into hot BALL Jars; cover with syrup made with 3 parts sugar to 2 parts water; partly seal and process for 20 minutes in a Hot-Water Bath. Seal immediately.

• Gooseberries (Jar-Cooked)
  Wash the berries, pack into hot BALL Jars, cover with a syrup made with 3 parts sugar to 2 parts water. Partly seal and process 20 minutes in a Hot-Water Bath. Remove from canner and seal at once.

• Gooseberries (Open-Kettle)
  Wash berries. Use same recipe as for Canned Cherries, page 14.

• Grapes (Jar-Cooked)
  Wash and stem, using only sound, firm grapes. Pack tight without crushing, into hot BALL Jars, fill with syrup made with 3 parts sugar to 2 parts water. Partly seal and process for 20 minutes in a Hot-Water Bath. Remove from canner and seal immediately.

• Grapes (Open-Kettle)
  Wash, stem and put in preserving kettle with thick syrup made with 2 parts sugar to 1 part water. Let come to boil. Fill hot BALL Jars to overflowing and seal at once.

• Grapefruit (Jar-Cooked)
  Select sound, ripe grapefruit. Wash and wipe dry. Cut a circular slice from each end, then remove the peel by cutting it in uniform sections through to the fruit. With a sharp pointed knife open each section separately and remove the fruit in as large pieces as possible, clean of all membrane and seed. Pack as solidly as possible, without breaking or crushing, into hot BALL Jars. Add four tablespoons sugar to each Quart Jar. Partly seal and process for 20 minutes in Hot Water Bath. Remove from canner and seal immediately.
  Note:—Another recipe which is preferred by some has no sugar added in the canning process. Prepare the grapefruit as given above. When the Jars are

Can fruits for winter use
half filled with fruit, add 3/4 teaspoon salt to each quart. No water or syrup is added. Process as specified above.

- **Peaches (Jar-Cooked)**
  
  Select peaches which are ripe but not soft. Those which are over-ripe may be used for jam or peach butter. Blanch (scald) quickly to loosen skins; cold dip for one minute. Remove skins and pack (halves or whole), without crushing, into hot BALL Jars. Fill with syrup made of 3 parts sugar to 2 parts water, partly seal and process in Hot-Water Bath for 20 minutes. Remove from canner and seal immediately. Addition of one cracked peach seed for one quart of syrup is desirable. Remove seed after boiling in the syrup for 5 minutes.

  Note: If canning a bushel or more of peaches or apricots at one time they may be peeled with the use of lye. Put 4 level tablespoons of granulated lye in agateware or iron kettle, add 2 gallons of water, heat to boiling. Put fruit in wire basket and immerse in boiling lye water until skin is loosened (30 to 60 seconds). Remove the fruit, wash at once (in running water if possible) until skins and lye are removed. Rinse the peeled fruit thoroughly.

- **Peaches (Open-Kettle)**

  Because of their rich flavor, peaches canned by the Open-Kettle method are preferred by some home makers to peaches canned by the Cold-Pack method.

  Make a syrup using 3 cups of sugar to 1 cup of water. Let the syrup come to a boil, then drop in the peaches, which have been peeled and halved, cook until very tender. Pack carefully, cut side down, into hot BALL Jars. Fill jars to overflowing with boiling syrup and seal immediately. If the peaches are weighed, a pound of sugar may be allowed for each pound of fruit. If not convenient to weigh the fruit you can start with a small amount of syrup, and if not enough, add more sugar and water in the same proportion, 3 to 1, to that already in the kettle. If this makes a heavier preserve than wanted, use a syrup of, say 3 cups of sugar to 2 cups of water. If any syrup is left, can the remaining peach syrup, to be used for pudding, sauces, gelatine, jellies and other winter-time desserts. It also makes a delicious ice cream.

- **Pears**

  Pears should be canned when slightly underripe. The flavor and quality are much improved, as well as the appearance of the product, since no surplus texture is found floating in the syrup or settling to the bottom of the jar.

  The rich, juicy Bartlett pear is always desirable for canning, but some of the late, rather flavorless varieties when canned in a thin syrup, make a pleasing breakfast fruit or luncheon dessert.

- **Pears (Jar-Cooked)**

  Pare, core, halve or quarter pears; drop immediately into a cold salt-water bath made in proportion of 1 tablespoon salt to 1 quart water, to keep them from discoloring. Boil gently from 4 to 8 minutes in a syrup made with 3 parts sugar to 2 parts water, pack hot into BALL Jars, cover with syrup in which pears were boiled. Partly seal and process for 20 minutes in a Hot-Water Bath. Remove from canner and seal immediately.

- **Pears (Open-Kettle)**

  Proceed the same as with peaches, only use a lighter syrup, 2 cups of sugar to 1 cup of water,
for pears are usually less tart than peaches. If stems of pears are in good condition they should be left on, as they add to the appearance of the product.

• Pineapple (Jar-Cooked)

Although the pineapple is not a native fruit in most parts of this country, there are times in the year when it sells for such a reasonable price that the housewife is justified in buying it for canning purposes.

Peel the pineapple and remove the eyes. When the flesh is firm cut into small cubes or remove the core and slice. If the texture is too soft, shred from the core, using a silver fork rather than a knife. Pack cold into hot BALL Jars, fill with a syrup made with 1 part sugar to 1 part water. Partly seal and process for 30 minutes in a Hot-Water Bath. Remove from canner and seal immediately.

• Pineapple (Open-Kettle)

Prepare Pineapple same as for Cold-Pack canning. Make a syrup using 1 part sugar to 1 part water. Drop the prepared fruit into the boiling syrup, boil gently until pineapple is clear (about 25 minutes). Pack into hot BALL Jars. Fill to overflowing with boiling syrup and seal immediately.

• Plums (Jar-Cooked)

Plums for canning should not be too ripe. Wash and prick the skins with a fork to prevent them from bursting. Pack tight without crushing, and cover with boiling syrup, made with 2 parts sugar to 1 part water for tart plums and a syrup made with 1 part sugar to 1 part water for the sweet varieties. Partly seal and process in a Hot-Water Bath for 20 minutes. Remove from canner and seal at once.

• Plums (Open-Kettle)

Make a syrup out of a pint of sugar and a pint of water for each quart of plums. Wash the plums, prick with a fork to prevent bursting, and drop them whole into the boiling syrup. Cook until soft. Pack in hot BALL Jars and seal immediately.

• Quinces (Jar-Cooked)

Peel, quarter and core the quinces. Boil for 1 1/2 minutes to shrink. Pack into hot BALL Jars. Fill Jars with hot syrup using 3 parts sugar to 2 parts water. Partly seal and process in a Hot-Water Bath for 20 minutes. Remove from canner and seal immediately.

• Quinces (Open-Kettle)

Quinces should be well ripened for canning. Wipe with a damp cloth to remove the “fuzz.” Peel and cut into pieces of convenient size, boil gently in a syrup made with 1 part sugar to 1 part water until fruit is tender. Pack the fruit into hot BALL Jars so that the proportion of syrup to fruit is greater than for pears or peaches. Seal immediately.

• Rhubarb

Rhubarb, or what is commonly known in some localities as pie-plant, is one of nature’s first and best spring tonics. It contains valuable mineral elements and should form a substantial part of the family diet all year round. It is not a fruit but the acid stem of a hardy perennial. Several cuttings may be had in one season but the first cuttings are by far the finest, as the stalks are more tender and juicy and richest in color and flavor. The strawberry variety makes an attractive pack. Rhubarb canned by the Cold-Pack method can be used in many pleasing ways.

• Rhubarb (Jar-Cooked)

Select young, tender stalks, trim and wash carefully, cut into one-half inch lengths, pack into BALL Jars, and cover with boiling hot syrup made with 3 parts water to 2 parts sugar, partly seal and process in a Hot-Water Bath for 20 minutes. Remove from canner and seal immediately.

• Rhubarb (Cold-Water Method)

Because rhubarb contains so much acid it can be canned, if handled carefully, by what is known as the Cold-Water Method. Rhubarb canned by this method is used chiefly for pie fillings.

Wash thoroughly and cut into pieces of convenient size, pack into BALL Jars, fill to overflowing with pure, cold water, fully seal and store in a cool, dry place.

• Canned Baked Rhubarb

Wash rhubarb and cut stalks, without removing the skin, into 1/2-inch lengths. Add 1 cup sugar to each quart of rhubarb. Bake in a covered baking dish until stalks are tender. Pack while hot into clean, hot BALL Jars and seal at once.

• Rhubarb (Open-Kettle)

Wash and cut the rhubarb into one-inch lengths. Make a syrup using one cup sugar to two cups water. Drop in rhubarb and boil slowly until tender. Pack in hot BALL Jars, fill to overflowing with boiling syrup and seal immediately.

• Mock Olives—Plain

Select plums which have just begun to ripen but which are still green. Make a brine using 1 pound salt to 1 gallon water. Heat brine and pour while hot over the washed plums and let stand for 36 hours. Pour off brine and place plums in a new brine made in same proportions and boil for 1 minute. Drain plums, pack into clean, hot BALL Jars and cover with new, hot brine. Partly seal and process in a Hot-Water Bath for 30 minutes. Remove from canner and seal immediately.

• Nectarines (Jar-Cooked)

A smooth-skinned variety of peach which may be canned without peeling, the same as apricots. Select slightly under-ripe fruit and wash carefully. Pack as tight as possible into clean, hot BALL Jars. Cover with boiling hot syrup made in the proportions of 3 cups sugar to 2 cups water. Partly seal jars and process in Hot-Water Bath for 20 minutes. Remove from canner and seal immediately.

• Nectarines (Open-Kettle)

(Same as Peaches)
HOME-MADE Juices add a delightful touch to the winter diet, and juices from grapes, black and red currants, blackberries, raspberries, elderberries, cranberries and tomatoes, make delicious, wholesome drinks for hot days in summer-time.

For use in gelatin desserts, puddings, sauces, ice cream, sherbets, etc., they cannot be excelled. If canned without sugar they are ready for the last stages in jelly making.

Home Canned Juices should hold an important place in the Canning Budget.

Following are directions given for making Juices from cooked and uncooked fruits including early and late varieties. Berry juices are the most popular of the early fruits, and grape, apple and tomato of the later varieties.

**FRUIT JUICES**

**From Cooked Fruit (Jar-Cooked)**

The flavor of fruit juices is finer if pressed from cooked fruit and processed in a Hot-Water Bath at a temperature below boiling point (180°-185° F.). Select sound, ripe fruit, crush and heat slowly to simmering point (about 185° F.). Strain through a double thickness of cheese-cloth. Let stand a few hours in a cool place to allow the sediment to settle to the bottom. Carefully pour off (or siphon) the juice from the dregs. Pour juice into clean, hot BALL Jars, partly seal, as for canning, and process for 30 minutes in a Water Bath at a temperature (180° F.) a little lower than the temperature (185° F.) at which the fruit was cooked. Remove from the canner, seal immediately.

**From Uncooked Fruit (Jar-Cooked)**

Press out the juice of uncooked fruit in a cider-press, fruit-press, or home-made press. Warm the juice in an enamel kettle to 110° F. Pour while-warm, into hot, clean BALL Jars, partly seal, as for canning, and process for 30 minutes in a Water Bath with temperature at 180° F. (30° F. below boiling). Remove from the Water Bath and seal immediately. Juices from sour cherries, peaches and apples handled in this manner are less likely to “flatten in taste.” Use this recipe for making Apple Cider.

**Fruit Juices (Open-Kettle)**

Prepare juices from uncooked or cooked fruit as directed under Jar-Cooked recipes. Place the poured off juice in a preserving kettle, add 1 cup of sugar for each gallon of juice. Heat thoroughly but do not let boil. Fill hot BALL Jars to overflowing and seal immediately.

**Notes on Fruit Juices**

The addition of sugar to fruit juices gives a finer flavor. One cup sugar to one gallon juice makes a desirable proportion.
Do not add sugar if juices are to be used for making jellies.

A confectioner’s thermometer for determining temperatures is an essential part of fruit juice equipment. To obtain perfect results it does not pay to “guess” at temperature.

Water in canner for fruit juices should come to within two inches of the top of the jar.

GRAPe JUICE develops a richer flavor if made from juice of cooked fruit.

SPECIAL RECIPES

- **Blackberry Cordial**
  Boil together for 15 minutes 1 quart blackberry juice, 1 pint white sugar and 1 tablespoon each of cloves, allspice, cinnamon, and nutmeg. Pour the boiling liquid into clean, hot BALL Jars and seal at once.

- **Cranberry Juice**
  Delightful to be used before a hearty dinner. It may be used in combination with orange and lemon for a summer drink or for water ice. Boil 4 cups cranberries in 4 cups water until skins burst (about 5 minutes). Strain juice through cheesecloth bag. Do not squeeze bag. Put juice in kettle, bring to boiling point, add ¾ cup granulated sugar and boil for 2 minutes. Fill hot BALL Jars to overflowing and seal immediately.

- **Grape Juice (Cooked)**
  Use clean well ripened but not over-ripe grapes. Pick over and wash grapes. Place in kettle, barely cover with water and boil until seeds are free. Strain through cheesecloth bag without squeezing. Measure the juice and replace on fire and bring to boiling point. Add one-half cup sugar to each quart of juice and let the mixture boil 5 minutes. Pour into hot BALL Jars and seal immediately.

- **Grape Juice (Uncooked)**
  Wash and stem firm, ripe grapes. Measure and place 1 cup grapes into clean, hot quart BALL jar. Add 1 cup sugar. Fill jar with boiling water and seal immediately. Invert jar for a few hours before storing. Will be ready for use in about 6 weeks.

  This recipe for grape juice is easy to make and is delicious.

- **Pineapple Juice**
  An excellent juice for fruit drinks, ices or sauces, may be made from the cores, eyes and skins of pineapples, which are often discarded. Chop and heat in a covered vessel until the juice slowly in a covered kettle for 30 to 40 minutes. Strain the mixture through a jelly-bag. Measure the juice, heat it and add ⅔ as much sugar as juice. Boil rapidly 10 minutes. Seal in clean, hot BALL Jars.

  This juice may be used in equal proportions with tart apple juice for jelly; ⅔ as much sugar as juice should be allowed.

- **Pineapple Lemonade**
  Make a thin syrup, using 2 cups water to 1 cup sugar and boil for 10 minutes. To this add 1 pint jar of crushed pineapple and the juice of 3 lemons. Seal in clean, hot BALL Jars.

  When serving, pour into ice-filled glasses and float half of a maraschino cherry or a thinly cut slice of lemon in each glass.

- **Pomona Punch**
  Make a very thin syrup, using 4 cups water to 1 cup sugar and boil for 20 minutes. Add 1 quart canned apple cider, the juice of 2 lemons and 2 oranges. Seal in clean, hot BALL Jars.

  Note: A thin slice of lemon in each glass adds much to its appearance when serving. Pomona Punch is also delicious frozen to frappe consistency.

- **Rhubarb Juice**
  RHUBARB juice combines well with other fruit juices in lending tartness to jellies. It is also good for jellied desserts and pudding sauces. It may be prepared from the stalks which have become too tough to use in other ways.

  Cut the rhubarb into small pieces, add just enough water to cover and simmer until soft. Strain the juice through a jelly-bag. To each quart juice add 1 cup sugar. Heat the juice until the sugar is dissolved, skim and bring to boiling point. Pour into clean, hot BALL Jars and seal.

- **Fruit Vinegars or “Shrubs”**
  DISOLVE 2 cups sugar in 1 cup vinegar, heat to boiling, and pour over 2 quarts ripe berries—strawberries, raspberries, or blackberries. Let stand 1 hour or more, stirring at intervals. Allow the juice to drip through a jelly-bag, bring to boil, and pour into clean, hot BALL Jars and process 10 minutes in a Hot-Water Bath Canner. Remove from canner and seal. Serve on cracked ice with an equal amount of carbonated water.

- **Strawberry Juice**
  STRAWBERRY juice makes an excellent jelly when combined with three times its measure of apple juice. Small, inferior berries that are not suitable for canning or preserving may be used for juice.

  Cover the berries with sufficient cold water to allow them to float. Simmer until they are soft and have begun to lose their color. Strain through a jelly-bag and drain off the juice. Measure the juice, bring to boil, and add ¼ as much sugar as juice. Bring the juice again to boiling point, skim and seal in clean, hot BALL Jars.

- **Tomato Juice (Jar-Cooked)**
  Use firm, ripe tomatoes. Wash and remove stem end, discard any that show signs of decay. Chop and heat in a covered vessel until the juice flows freely. Strain the juice while hot into hot BALL Jars, add one teaspoon salt, completely seal and process for 20 minutes in a Hot-Water Bath.

  If it is to be used for infant feeding, salt should be omitted. If a thicker juice is desired return the strained juice to the stove and boil it until it is reduced to one-half the original volume, and process as directed above.
VEGETABLES

OUR APPETITE for vegetables is constantly increasing with our growing appreciation of their food values. From our newer knowledge of nutrition we have learned that the value of canned fruits and vegetables as sources of the much-needed mineral salts, iron, lime, vitamines, and other materials, is approximately equal to that of freshly cooked fruits and vegetables.

A closet of home canned vegetables is a splendid asset during the winter months. From these a nourishing soup may be quickly made or an appetizing salad can be added to an otherwise inadequate meal. A housewife who has such vegetables to be drawn from at a moment's notice need never worry over the arrival of unexpected guests, for she is always prepared.

It is most important to have fresh, sound vegetables for canning. When care is taken to use fresh, sound products, and details as specified in the individual recipes and time tables for canning are carefully observed, vegetables can be canned successfully at home by using the Jar-Cooked and Oven Method.

BEFORE STARTING TO CAN VEGETABLES READ OVER CAREFULLY INSTRUCTIONS ON THE JAR-COOKED (HOT OR COLD PACK) METHOD, PAGES 6, 7 and 8. Remove Jars from canner at end of processing period and cool as instructed. Fill Jars with the water in which vegetables were cooked to retain valuable mineral salts, etc. If not enough add clear boiling water. Never open Jars to refill with liquid.

• Asparagus

Wash and grade for uniformity. Tie in bundles, cutting stalks to fit height of jar. Boil by standing in boiling water, which does not cover the tips. Cover kettle and boil for 5 minutes. Pack hot into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, fill with cooking water, partly seal and process for 3 hours in a Hot-Water Bath or for 40 minutes in a Steam Pressure Cooker at 10 pounds.

• Beans (Green or Wax)

Wash and remove strings, break into small pieces. Cover with boiling water and boil 5 minutes. Pack hot into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, fill with boiling water in which beans were cooked, partly seal and process for 3 hours in a Hot-Water Bath or for 40 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.
• Beans (Lima)
  Carefully sort and grade for size and age. When shelling beans place the old ones into a separate lot for soup, and the young and tender ones into another assortment for extra fine pack. Boil young beans for 5 minutes and older beans for 10 minutes. Pack quickly and loosely into clean, hot BALL Jars to within 1 inch of top, add 1 level teaspoon salt to each quart, cover with cooking water, partly seal, and process for 3 hours in a Hot-Water Bath or for 60 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

• Beets
  Beets should be canned before they grow too large. Small beets should be canned whole. Leave on 1 inch of the stem and all of the root while blanching. This will prevent loss of color. Wash and boil 15 minutes until skins loosen. Slip skins. Pack into hot BALL Jars. Do not add salt. Fill with boiling water, partly seal and process for 2 hours in a Hot-Water Bath, or for 40 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

• Brussels Sprouts and Cabbage
  Wash and boil for 10 minutes in an open kettle. Add salt to cooking water in proportion of 1 level teaspoon salt to 1 quart water. Pack hot into clean BALL Jars, fill with cooking water, partly seal, and process for 1 1/2 hours in a Hot-Water Bath, or for 40 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal at once.

• Carrots
  Sort and grade for uniform size. Wash and scrub with a stiff vegetable brush. Scraps of carrots are old. Boil for 15 minutes. Slice or pack whole into hot BALL Jars. Add 1 level teaspoon salt to each quart, fill with cooking water, partly seal and process for 2 hours in a Hot-Water Bath or for 45 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

• Cauliflower
  Soak cauliflower for 1 hour in a cold brine made in the proportion of 1 tablespoon salt to 1 quart water. This will remove any lurking insects and help to prevent discoloring later in the cooking process. Boil for 3 minutes, pack quickly into hot BALL Jars, add 1 teaspoon salt to each quart, fill with cooking water, partly seal and process for 1 1/2 hours in a Hot-Water Bath or for 40 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal at once.

• Corn
  Select sweet-corn ears of uniform size and proper ripeness. Remove husks and silk and cut corn from cob, using a sharp knife and cutting as close to the cob as possible. Put corn in kettle, just cover with boiling water and boil for 3 minutes. Add 1 teaspoon salt and 2 teaspoons sugar to each quart and pour while boiling hot into hot BALL Jars, being careful not to pack too tight, as corn swells during the canning process. Partly seal, process in a Hot-Water Bath canner for 3 hours or in a Steam Pressure Cooker for 90 minutes at 10 pounds. Remove from canner and seal immediately.

• Corn on Cob
  Remove husks and silk, boil on cob for 5 minutes. Pack into hot BALL Jars. Add 1 level teaspoon salt and 2 teaspoons sugar to each quart and fill with cooking water. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.
  Note: When using 2-quart jars process for 4 hours in a Hot-Water Bath, or for 2 hours in a Steam Pressure Cooker at 10 pounds. One 2-quart jar will hold 7 or 8 ears.

• Eggplant
  Peel, cut into 1/4 to 1/2-inch slices. Boil for 3 minutes, pack into hot BALL Jars, fill with cooking water and process for 2 1/2 hours in a Hot-Water Bath, or for 60 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.
  Do not add salt as this causes eggplant to turn dark.

• Greens (Including Spinach and Turnip Greens)
  Among the wild greens which we find flourishing in our gardens and fields in spring and early summer are pepper cress, sour dock, dandelion and others. These, as well as our cultivated spinach, turnip greens, Swiss chard, and kale are edible and all contain valuable food elements. Wash thoroughly, steam or heat in a covered kettle for 15 minutes or until completely wilted, using just enough water to prevent burning. Pack quickly and loosely into hot BALL Jars, add 1 level teaspoon salt to each quart, fill with cooking water, partly seal, and process for 3 hours in a Hot-Water Bath, or for 75 minutes in a Steam Pressure Cooker at 10 pounds.

• Hominy
  Put in kettle and bring to boiling point. Pack into hot BALL Jars. Add one teaspoon of salt to each quart (if not seasoned during pre-cooking). Fill Jars with hot water, partly seal and process in Hot Water Bath for 3 hours or for 90 minutes in Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

• Kohlrabi and Turnips
  Sort and grade for uniform size. Wash and scrub with a stiff vegetable brush. Scraps, if kohlrabi and turnips are old. Boil for 15 minutes. Slice or pack whole into hot BALL Jars. Add 1 level teaspoon salt to each quart, fill with cooking water, partly seal and process for 2 hours in a Hot-Water Bath or for 45 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

There's nothing cleaner than glass
**Mushrooms**

Not all mushrooms are edible. If the wild or uncultivated varieties are picked for table use and canning be sure that they belong to an edible variety.

Wash thoroughly, skin if necessary. Boil for 3 minutes in boiling water or in a steamer. Pack closely, being careful not to crush, into hot BALL Jars; add 1 level teaspoon salt to each quart. Fill with cooking water and process in a Hot-Water Bath for 3 hours or for 60 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Okra**

Use young and tender pods of uniform size. Wash, remove cap without cutting into pod. Boil young okra from 1 to 3 minutes; more mature pod 6 to 8 minutes. Pack into hot BALL Jars, add 1 teaspoon salt to each quart, fill with cooking water, partly seal and process for 2 hours, or in a Steam Pressure cooker for 30 minutes at 10 pounds.

If okra is to be used for soup, it should be sliced after boiling as it is hard to cut when canned.

**Parsnips**

Sort and grade for uniform size. Wash and scrub with a stiff vegetable brush. Scrape if parsnips are old. Boil for 15 minutes. Slice or pack whole into hot BALL Jars. Add 1 level teaspoon salt to each quart, fill with cooking water, partly seal and process for 2 hours in a Hot-Water Bath or for 45 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Peas**

Select fresh young peas. Wash pod thoroughly before shelling. Do not wash the peas. Sort, keeping those of the same size together. Cover with boiling water and boil young tender peas for 3 minutes; more mature for 5 minutes. Pack loosely into hot BALL Jars, add 1 teaspoon salt to each quart, fill with cooking water, partly seal and process for 3 hours in a Hot-Water Bath, or for 60 minutes in a Steam Pressure Cooker at 10 pounds.

Note: Grading and sorting are necessary because the boiling period varies with the age and size of the pea. Do not attempt to can peas which have begun to lose their color.

**Bell Peppers**

Can the sweet bell pepper with the skin on. Remove the seed-pod. Boil 5 minutes, flatten and pack tight in hot BALL Jars, add 1 level teaspoon salt to each quart, fill with cooking water and process for 45 minutes in a Hot-Water Bath, or for 15 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Pimiento Peppers**

The best sweet peppers for canning are the Spanish variety known as Pimientos. The pod is thick and fleshy, covered with a thick, tough skin which must be removed before canning.

Wash, place in pan with no water, put in moderately hot oven for 6 to 10 minutes (be careful that no discoloration takes place) or until the skin blisters and cracks. Remove from oven and slip off skins. Carefully remove the seed-pod so that the flesh of the pimiento is not broken. Flatten pimiento; pack dry into hot BALL Jars, partly seal and process in a Hot-Water Bath for 45 minutes, or for 15 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Pumpkin**

Wash, cut into slices and cook until tender. Mash and stir the pulp until smooth and pack immediately into hot BALL Jars. Partly seal and process for 3 hours in a Hot-Water Bath, or for 75 minutes in a Steam-Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

For those who are especially fond of pumpkin pie, canned pumpkin saves time and labor in the preliminary baking process.
Sauerkraut

Pack sauerkraut into clean, hot BALL Jars, add no water or salt, partly seal, and process for 1 hour in a Hot-Water Bath, or for 40 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

To make sauerkraut in Jars proceed as follows:—Shred the cabbage as usual, pack tightly into BALL Jars (Glass Top preferred). Add 3 scant teaspoons of pure salt to a quart. Fill jars to within one inch of the top and seal. If packed well the liquid will come nearly to the top of the jar. Will keep 6 weeks.

Squash

Boil corn cut from cob for 5 minutes. Add the corn and equal quantity of young, tender shell beans, or lima beans which have been boiled for 5 minutes. Pack quickly and loosely, into hot BALL Jars, add 1 teaspoon salt to each quart, fill jar with cooking water, partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds.

Sweet Potatoes

Sweet potatoes should be canned as soon as they are dug. This is necessary because sometimes in digging the skin of the potato is bruised or broken, and if allowed to stand, these places turn dark and may start to decay. A sweet potato, which is dry and mealy when canned is desirable. Some of the best varieties for canning are the Nancy Hall, Triumph and Southern Queen.

For canning whole, select firm, small potatoes of uniform size and color. Wash thoroughly and boil, or steam, for 15 minutes. Peel quickly. It is advisable not to stick potatoes with a fork, as this may cause them to discolor. Pack into hot BALL Jars. Do not add water. Partly seal and process for 3 hours in a Hot-Water Bath, or for 75 minutes in a Steam Pressure Cooker at 10 pounds.

Tomatoes (Open-Kettle)

Scald until skins crack, peel and core, cut into pieces, add salt to taste, boil for 20 minutes, pack immediately into clean, hot BALL Jars and seal immediately.

Tomatoes and Corn

Boil fresh corn cut from cob for 5 minutes. Scald tomatoes until skins loosen, peel and core, cut into small pieces. Mix thoroughly 2 parts tomatoes to 1 part corn. Heat mixture to boiling, pack into clean, hot BALL Jars, add 1 teaspoon salt to each quart, partly seal, and process for 2 hours in a Hot-Water Bath, or for 40 minutes in a Steam Pressure Cooker at 10 pounds.

Tomato Creole Sauce (Open-Kettle)

For dressing ordinary steak or decorating plain boiled rice, besides adding a distinctive flavor, tomato creole is one of the favorite sauces.

Mix together 1 quart sliced white onions and 12 finely chopped green peppers; simmer until soft. Add about twice this bulk in tomatoes and cook together over a low fire until tender. Season to taste. Pack into clean, hot BALL Jars and seal immediately.

Tomatoes and Okra

A combination of ½ tomato and ½ okra makes an excellent soup, which can be served directly from the jar, or it may serve as a base for the much renowned southern gumbo.

Cut the okra into thin slices and cook gently with the tomatoes until tender. Pack immediately into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, partly seal and process for 10 minutes in a Hot-Water Bath. Remove from canner and seal immediately.

Tomato Sauce

Cook small and broken tomatoes until they are soft. Press through a sieve to remove skins, seeds and cores. Let stand a few minutes until the pulp settles, pour off the clear water, add 1 level teaspoon salt to each quart of pulp, then cook quickly until it begins to thicken. Pack immediately into clean, hot BALL Jars, partly seal and process for 30 minutes in a Hot-Water Bath, or for 15 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately. This may be used as a foundation for soups, sauces or relishes.

Tomatoes (Whole)

Select firm, smooth, medium sized tomatoes of uniform size. Scald until skins loosen, cold-dip, peel and remove stem end. Pack closely without crushing, into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, fill with finely strained tomato juice, partly seal and process for 30 minutes in a Hot Water Bath, or for 15 minutes in a Steam Pressure Cooker at 5 pounds. Remove from canner and seal at once.
MEAT, POULTRY, FISH

CANNING of meat and poultry has become an established part of the year-round canning program. Butchering season brings a welcome supply of fresh meat and an ample surplus as well; to be stored by salting, smoking, drying, and canning for the months of the year when the supply of fresh meat is exhausted. Meat Canning is of special economic importance as it considerably reduces the family food bill. In butchering time and poultry culling season, prices of meat and poultry are lowest for those who sell, as well as for those who buy. The non-lying hens and surplus cockerels should have a reserved space on the pantry shelf for the coming winter to save the cost of feed. This is the best time to plan the meat canning program.

Canned meat has a special advantage over meat which has been salted, smoked or dried. It retains most of its original flavor and texture and can therefore be prepared in many different ways, thus adding a welcome variety to the regular daily diet.

- Pre-Cooked Meats and Poultry

Some housekeepers prefer to partially cook their meats, including chicken, before canning them. If a browned appearance and flavor is desired, the meat should be quickly seared in a frying pan or in an iron kettle, or it may be roasted before packing.

It is advisable not to cover meat with beaten egg, flour, cornmeal and fine cracker or bread crumbs, as this delays heat penetration into the meat. Any meat juices or liquids obtained from the searing process may be poured over the meat after it has been packed into the jar. It is not essential that the jar be filled with liquid. Or the “dry pack,” in which no liquid is added, may be used. Salt and pepper to taste (proportion—1 part salt to ½ part pepper) may be added to pre-cooked meats, if desired.

Bones may be retained in canning as they aid in securing quicker heat penetration as well as adding to the flavor of the meat.

Do not attempt to cut time in the sterilization period for pre-cooked meats. The same amount of time is necessary for the “pre-cook” as for the “raw” pack.

- General Principles and Directions

For canning Beef, Veal, Pork, Lamb, Mutton, Poultry and Wild Game

Whether meat is partly cooked or remains uncooked (raw) when it is packed into the jar for canning, the following general principles and directions should be observed as meat, due to its composition, offers a medium for the growth and development of some of the more active and resistant spore-forming bacteria.

These principles and directions apply to canning beef, veal, pork, lamb, mutton, poultry and wild game, including rabbit, moose, bear, caribou, pigeons and wild birds.

- Preparation

1—Bleed well and cool meat thoroughly before using. (Approximately 24 hours is required for animal heat to leave body.)

2—Do not soak meat in water. This extracts the meat juices and renders meat stringy and tough.

Use Ball Perfect Seal rubbers
3—Wipe meat with damp cloth, do not wash, but clean meat and clean utensils should be used.
4—Cut meat into convenient size for packing.

**Packing**
1—Pack loosely into clean, hot BALL Jars. Arrange the pieces to allow for proper heat penetration. This applies to pre-cooked, as well as raw meat.
2—Add two level teaspoons salt to each quart (raw pack).

By adding 2 level teaspoons salt to each quart jar of raw meat, enough meat juices will be extracted during the processing (sterilization) to form sufficient liquid in the jar. It is not necessary to have the jar filled with liquid. Lack of liquid does not affect the keeping qualities of a product. For Pre-cooked Meats add enough of the pan grease to make gravy when jar is opened.
3—Do not add water to meat which has been packed raw. Adding water to meat when canning renders it stringy, detracts from the flavor and reduces the number of its uses to practically soup, stews and hash. Add water for soup and stew.
4—Pre-cooked meat may be seasoned before searing, frying or roasting.
5—Bones, if small, may be packed in the jar with the meat, as they add to the flavor and aid in heat penetration.

**Processing and Storing**
1—Partly seal jar and process for 3 hours in a Hot-Water Bath Canner, or for 90 minutes in a Steam Pressure Cooker at 10 pounds.
   *Note:* The same length of time for processing (sterilization) is required for pre-cooked meats as given for uncooked or raw-pack.
2—Remove from canner and seal immediately.
3—Store in a cool, dry place.
4—REHEAT all canned meats thoroughly before using.

**SPECIAL RECIPES**

**Beefsteak**
A sirloin of beef is skinned and cut into suitable pieces for serving. Heat butter or grease in frying pan. Put the sliced steak into hot grease and sear quickly on both sides. Season with salt and pepper to taste. Brown but do not cook entirely done. Pack while hot into hot BALL Jars. Add two to four tablespoons of the pan grease to each Jar. Partly seal and process in Hot Water Bath for 3 hours or for 90 minutes in Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Beef Stew**
Cut meat into cubes, brown slightly in frying pan. After browning put meat into stew pan, season with salt and pepper, cover with water, bring to boiling point and cook for ten minutes. Add diced vegetables (potatoes, carrots, onions, tomatoes) and cook until vegetables are thoroughly heated. Pack the mixture into hot, sterilized BALL Jars. Partly seal and process for 3 hours in Hot Water Bath or for 90 minutes in Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Brains**
Brains should be soaked in several changes of cold water to draw out the blood. Remove the membranes. Sear or fry and sprinkle with salt and pepper. Pack into hot BALL Jars, add the fat in which the brains were fried, thinned with a little hot water. Partly seal and process for 3 hours in a Hot-Water Bath or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Chops**
Pork, veal or lamb chops may be cut to fit the jar and then packed raw (uncooked) into hot, clean BALL Jars. Add 2 level teaspoons salt to each quart. Or chops may be seared first. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Goulash**
The cheaper cuts of meat or meat scraps may be used in making goulash. If the different ingredients of the following recipe are not at hand, a good goulash can be made by using meat, fat, onions, tomatoes, flour, salt and pepper and leaving out the other ingredients.

- 2 pounds meat (beef, veal or heart of pork may be used).
- 2 tablespoons of butter or any good fat.
- 1 carrot (medium size) finely sliced.
- 1 stalk celery cut in small pieces.
- 1 pint tomatoes (canned or fresh tomatoes). 1 to 2 bay leaves.
- 6 whole cloves.
- 1 pinch thyme.
- 1 tablespoon finely chopped parsley.
- Salt and pepper to taste.

Paprika to taste.

Cut meat into small pieces, add other ingredients and heat thoroughly. Pack hot into Ball Jars; partly seal and process 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Heart**
Remove the tough membrane and cut the heart in pieces. Pack raw or pre-cooked into hot, sterilized BALL Jars. Add two level teaspoons of salt to each quart. Partly seal and process for 3 hours in Hot Water Bath or for 90 minutes in Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Kidneys**
Split kidneys and remove inside sack; then soak kidneys in several changes of cold saltwater made in proportion of 1 level teaspoon salt to 1 quart water. Cut kidneys into slices about ½ to 1/2 inch thick, sear in hot fat, sprinkle with salt and pepper and fry to a brown color. Pack kidneys while hot into clean, hot BALL Jars and add the fat.
in which kidneys were fried. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Liver**

Cut calf, beef, lamb or hog liver into slices one-half inch thick. Remove skin and blood vessels. Soak in cold water for 45 minutes. Remove from water and drop into boiling water for five minutes or brown quickly in a little hot fat. Pack while hot into hot BALL Jars. Add one teaspoon salt to each quart. Seal in Jars and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds pressure.

- **Pork Sausage**

Form the seasoned sausage meat into small balls or cakes. If the sausage is put into casings puncture the skin to prevent bursting. Fry in grease derived from the sausage meat. Drain off grease and pack tight as possible without breaking, into clean, hot BALL Jars. Add one teaspoon salt to each quart, and fill with boiling water. Partly seal and process for 3 hours in a Hot-Water Bath or for 90 minutes in a Steam Pressure Cooker at 10 pounds pressure. The seasoned sausage meat may also be formed into balls or cakes and packed raw (uncooked) into the jar. A more natural flavor is retained, but there is a decided shrinkage and waste of jar space.

- **Roast Meat**

Select the piece of meat wanted for roast, trim and wipe with a damp cloth. Put the meat in a roasting pan, and sear quickly, turning the meat so all sides are seared to prevent the loss of the meat juice. As soon as well seared sprinkle with salt and pepper. Add boiling water to the grease in the roasting pan. Baste frequently. Turn the meat from time to time and roast until nicely browned. Cook until meat is done (it should not be red in the center) without cooking it entirely tender. Slice and pack into hot, clean BALL Jars to within 1/2-inch from top of Jar. Add the gravy from the roasting pan. Season with bay leaves, cloves and nutmeg to suit taste. Fill jars with the seasoned liquid to which some gelatine dissolved in cold water has been added. Partly seal and process for 3 hours in a Hot-Water Bath or for 1 hour in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Spare Ribs**

Wipe clean with damp cloth. Roast as for table use until the bones will slip. With a sharp knife cut the inside of each rib and remove bones. Salt and cut meat in pieces suitable for serving or make into a roll that will go into the Jar. Pack in hot, sterilized, BALL Jars. Add enough of the brown drippings to make gravy. Partly seal and process for 3 hours in Hot Water Bath or for 90 minutes in Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Sweetbreads**

Clean sweetbreads and soak in cold water for 2 hours, change water several times, drain well and place them into salted, boiling water for 5 minutes (1 teaspoon salt to 2 quarts water). Remove and drain thoroughly. Pack into clean, hot BALL Jars, add 2 teaspoons salt to each quart, and fill with boiling water. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Tongue**

The tongues (beef, veal, pork, lamb) should be cleaned, salted and then boiled, skins removed and packed into clean, hot BALL Jars with a little soup stock or meat jelly added. Add 2 teaspoons salt to each quart. Partly seal and process for 3 hours in a Hot-Water Bath or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Cornd Beef**

Place the corned beef in a kettle and cover with cold water. Bring slowly to boiling point and simmer for 1 hour. Remove meat and cut into pieces of convenient size. Pack meat into clean, hot BALL Jars. Heat liquid in which meat was boiled and season with bay leaves, cloves and nutmeg to suit taste. Fill jars with the seasoned liquid to which some gelatine dissolved in cold water has been added. Partly seal and process for 3 hours in a Hot-Water Bath or for 1 hour in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Poultry**

Canned chicken has a delicious flavor. No pantry shelf is complete without canned chicken ready to serve at short notice when unexpected company arrives or when it becomes necessary to prepare a meal in a hurry.

- **Preparation**

1—Kill at least six hours before canning.
2—Remove feathers, bleed well and cool thoroughly.
3—Singe, wash thoroughly.
4—Draw entrails. Remove heart, liver and gizzard.
5—Joint the chicken as for cooking.
6—Spread out the pieces on tray or cutting board, to pack quickly into clean, hot BALL Jars.

- **Packing the Chicken**

1—First place in a drumstick.
2—Place a thigh next to drumstick.
3—Place two wings next to the thigh, fitting the elbow of one wing into the other.
4—Place the neck portion in center of jar, with rib-end down. This acts as a support for the remaining pieces and also allows heat to quickly penetrate center of jar.
5—Cover the neck-piece with back.
6—Spread white meat on top of back.
7—Fit in remaining pieces completely to fill jar.
8—Soak liver in cold water, place near bottom of jar. If placed near top, it may discolor other meats.

Use only sound, fresh, firm products
9—Add two level teaspoons salt to each quart jar.
10—Place on jar ring, partly seal jar.
11—Process in a Hot-Water Bath for 3 hours, or in a Steam Pressure Cooker for 90 minutes at 10 pounds.
12—Remove from canner and seal immediately.

Meat juices (liquid contents) in canned meat should form into jelly.

- **Fried Chicken**
  Prepare the chicken, season and brown in hot fat. Do not dip in flour or crumbs. Cook until meat is about three-fourths done. Pack while hot into hot sterilized BALL Jars. (Pour into the Jar the hot grease from the frying pan.) Partly seal and process for 3 hours in a Hot-Water Bath or for 90 minutes in a Steam Pressure Cooker at 10 pounds pressure.

- **Roast Fowl**
  Chicken, Duck, Turkey, Goose or Guinea Fowl may be used. Prepare, season and roast as though for serving immediately. Cook until done, but not entirely tender. Cut meat from bones. Pack in hot sterilized BALL Jars. Skim excess grease from gravy and pour gravy over meat in Jar. Partly seal and process for 3 hours in a Hot-Water Bath or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Fried Fish**
  Clean fish and remove entrails. For large fish, split along the back and remove backbone. For small fish, bones may be retained. Place in a salt-water bath, using 1/2 cup salt to 1 quart water. Allow fish to remain in this brine, according to thickness of the meat, from 10 minutes to 1 hour, in order to draw out the blood and harden the meat. Drain, wash, dry, and cut into pieces which can be conveniently packed into the jars. Fry in deep fat until nicely browned. Drain well and place the pieces on coarse paper to absorb excess fat. Pack into hot, clean BALL Jars. Do not add any liquid. Partly seal and process for 4 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Fried Chicken**, **Roast Fowl**, **Salmon and Other Large Fish**

  **Salmon and Other Large Fish**
  Scale fish, wash, cut open, remove entrails, thoroughly wash, wipe dry and cut into pieces of convenient size for packing. Pack raw into clean, hot BALL Jars, and add 2 level teaspoons salt to each quart. Do not add water. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Fried Fish**
  Clean fish and remove entrails. For large fish, split along the back and remove backbone. For small fish, bones may be retained. Place in a salt-water bath, using 1/2 cup salt to 1 quart water. Allow fish to remain in this brine, according to thickness of the meat, from 10 minutes to 1 hour, in order to draw out the blood and harden the meat. Drain, wash, dry, and cut into pieces which can be conveniently packed into the jars. Fry in deep fat until nicely browned. Drain well and place the pieces on coarse paper to absorb excess fat. Pack into hot, clean BALL Jars. Do not add any liquid. Partly seal and process for 4 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Fish Roe**
  Use only the roe of freshly caught fish, and only such roe as is known to be good to eat. Clean the roe by removing the shreds and strings adhering to it and wash well in cold water, being careful not to break the roe. Soak well for about 2 hours in brine, made in the proportion of 1 level tablespoon salt to 1 quart water. Drain and pack into hot, clean BALL Jars. Partly seal and process for 4 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Clams**
  Use only fresh clams. If clams are muddy, wash before opening. After opening, discard all broken or discolored clams. Pack into hot, clean BALL Jars. Fill jar to within 1/2 inch from top with hot brine made in proportion of 1 teaspoon salt to 1 quart water. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Oysters**
  In canning oysters, be sure they are absolutely fresh, have not "soured" and contain no oysters that are spoiled. It is therefore best to open them by hand and absolutely reject oysters which have the shell partly open, as this is a sign that the oyster in this particular shell is dead and unfit for use.

  Rinse oysters in cold water to be sure no pieces of shell or grit are packed with oysters into the jars. Pack oysters, with their natural liquid, into hot, clean BALL Jars and fill with boiling brine, made in the proportion of 1 teaspoon salt to 1 quart water. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

- **Salmon and Other Large Fish**
  Scale fish, wash, cut open, remove entrails, thoroughly wash, wipe dry and cut into pieces of convenient size for packing. Pack raw into clean, hot BALL Jars, and add 2 level teaspoons salt to each quart. Do not add water. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.
Lobsters

Plunge live lobsters into rapidly boiling soda water (1/2 pound baking soda to 2 gallons water), continue boiling for 15 minutes; drain off the water, and cover again with clear boiling water, and cook for 15 minutes longer; remove from fire, drain and plunge lobsters into cold water. When the lobster is cooled enough to handle, then remove claws and tail. Split tail and remove intestine, take body from shell and remove the stomach, crack the claws and pick meat from them. Mix the meat from the claws with the meat from body and tail, add 2 level teaspoons salt to each quart, and pack into clean, hot BALL Jars. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

Frog Legs

Both bull-frogs and the small green marsh frogs are edible, but the latter are more delicate and more tender. Only the hind legs are eaten and they are generally considered to be at their best from June to October.

Cut off the legs, loosen the outer skin and turn downward and pull off. Then cut off the skin and toes. Wash the legs in cold water, to which has been added 2 tablespoons vinegar, or lemon juice, and 1 tablespoon salt for each quart of water. Drain and wipe dry. The frog legs can now be prepared in different ways. They can be fried in deep fat until nicely browned. The meat can be cut off the bones, or the bones left in. Pack into hot, clean BALL Jars. Liquid from frying may be added if desired. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds.

Or pack frog legs, uncooked, into jars, add 2 teaspoons salt to each quart, partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

Crab Meat

Place live crabs into a large kettle of rapidly boiling water. Boil quickly for 20 minutes. Remove crabs and wash them in cold water. Crack shell and pick out the meat, being careful to remove all particles of shell. Wash crab meat in a cold brine made in proportion of 1 teaspoon salt to 1 quart water. Drain and pack into clean, hot BALL Jars. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately. Note: Quick cooling is necessary in order to prevent discoloration of crab meat.

Shrimp

Shrimp should be canned when absolutely fresh.

Place the shrimp, peeled or with shell on, as desired, into a large kettle containing boiling water into which salt, in proportion of 1 pound salt to 1 gallon water, has been added. Boil from 5 to 8 minutes. If shrimp are not peeled before boiling, sprinkle with salt when removed from boiling water in order to harden the meat so they may be peeled more easily. Pack into clean, hot BALL Jars and add 1 level teaspoon salt to each quart. Boiling water may be added if desired, or the dry-pack in which no water is added, may be used. Partly seal jars and process in a Hot-Water Bath for 3 hours or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.
SOUPS

SOUPS are very nourishing and should be served each day if possible. They are easy to make. They are also economical because they can be made from the tougher cuts of meat and from vegetables which may be specked (not spoiled).

Vegetable soup should be made “in season” while the home garden is producing and the prices of vegetables purchased in the home market are relatively low.

For those who butcher or pack their own meats, butchering time becomes soup canning time as well. The bones and “trimmings” are then made into a nourishing soup stock for future use.

During poultry culling season when the thrifty home-maker is canning her “culls,” to save the price of winter feed, she reserves the bony parts and the chicken feet for soup stock. The feet should be used, as they contain a large per cent of gelatin, and if properly prepared by cleaning, scalding and skimming, they make a very fine base for chicken soup stock.

It is advisable to read over General Directions, pages 6 to 8, before canning any products.

• Asparagus Puree

In canning asparagus, the large tough butts may be used for soup instead of being wasted.

Cut into pieces, and cook in enough water to cover until soft enough to press through sieve. Pack into hot BALL Jars, add 1 level teaspoon salt to each quart, and 1 teaspoon grated onion, if desired. Partly seal and process for 3 hours in a Hot-Water Bath, or for 60 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately. When opened, milk may be added to make cream of asparagus soup.

• Chicken Gumbo

1 large frying size chicken, cut as for frying.
½ pound smoked ham—chopped.
6 large ripe tomatoes, skinned and chopped.
1 large onion, chopped.
2 pints okra, sliced.
½ pod red pepper—remove seeds.
1 green pepper—chopped.
1 bay leaf.
1 sprig parsley.
2 tablespoons butter or other fat.
3 quarts boiling water.
Salt and Black pepper to taste.

Heat the fat in a soup kettle, add ham, chicken and okra. Brown well but do not scorch. Add other ingredients and cook slowly until the mixture is well flavored and is as thick as desired. Pack while hot into hot BALL Jars, partly seal and process for 3 hours in Hot-Water Bath or for 60 minutes in Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

• Clam Broth

Open fresh clams and place them with their liquid in a kettle. Add enough cold water to cover clams. Add a few stalks of celery, cut fine. Boil for 10 minutes. Season with salt and pepper to taste, and add 1 level tablespoon butter for each 50 or 60 clams. Strain and pour while hot into can, hot BALL Jars. Partly seal and process in a Hot-Water Bath for 3 hours, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

• Clam Chowder

24 clams, chopped fine.
2 quarts hot water.
2 medium, white onions, sliced.
2 stalks celery, finely chopped.
2 leeks, cut fine.
2 slices pork or bacon, cut into small pieces.
3 large potatoes, peeled and diced.
1 to 2 teaspoons salt (to taste).
½ teaspoon pepper.
3 large tomatoes, peeled and cut fine.
¼ teaspoon thyme.
1 teaspoon finely chopped parsley.

(Leeks, celery and tomatoes, any one or all, may be omitted if preferred).

Heat the pork or bacon and fry the onions, celery and leeks in the fat; add the liquid from the clams, water and potatoes, boil 10 minutes, add clams, tomatoes, salt, pepper and thyme (Worcestershire sauce according to taste may be added). Boil mixture 10 minutes, add the parsley and while hot pour into hot BALL Jars. Partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

When serving, equal amounts of butter and flour may be creamed together and added as thickening to the heated chowder.

Bring to boiling point. Pack while hot into hot BALL Jars. Partly seal and process for 3 hours in Hot-Water Bath or for 60 minutes in Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

• Chicken Soup

Cook in a quart of water the bony pieces of medium sized chicken. When tender remove meat from bones and chop into small pieces. To each cup of chopped meat add the following—
1 tablespoon rice.
½ cup celery, chopped.
1 or 2 tablespoons chopped onion.
2 cups broth in which chicken was cooked.
½ teaspoon salt.
¼ teaspoon black pepper.

Cover jars with one inch of water in a Hot-Water Bath
**Fish Chowder**

4 Bermuda, or white onions, medium size, diced.
3 potatoes, medium size, diced.
1 pound fish, picked from bones.
1 level tablespoon butter.
½ teaspoon white pepper.
1 to 2 level teaspoons salt (to taste).

To 1 pound fish meat picked from the bones, add the above ingredients, cover with water and boil gently for 20 minutes. Pack into clean, hot BALL Jars, partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Green Pea Puree**

Cook the peas 1 hour in enough water to cover, press through a sieve, pack into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Soup Stock**

Cut meat and fat from bones, crack bones and place into kettle. Add pieces of lean meat too small for other uses. Cover with cold water and simmer (not boil) for 6 hours. Seasoning, such as onion and celery leaf, may be added. Remove from fire and strain through colander. Cool and skim off all grease. Reheat and when boiling pour into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, partly seal, process for 3 hours in Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal at once.

Stock made from chicken or a combination of chicken and veal or other meats is made the same way. Rice or barley may be canned with the stock if desired.

**Brunswick Stew (Virginia)**

1 gallon hot water.
1 large, or 2 small chickens (cut up as for a stew).
1 pint tomatoes, chopped.
2 slices bacon.
2 large onions.
6 ears corn (cut from cob).
1 cup butter.
1 cup fine bread or cracker crumbs.
1 teaspoon salt.
½ pod red pepper.
½ teaspoon white pepper.

Place the onions, chopped fine, tomatoes skinned and cut into small pieces, the bacon and chicken into a large soup pot. Pour on the water and let mixture simmer until tender. Remove the chicken from the liquor. When cool enough to handle cut the meat from bone, discarding tough skin and gristle. Chop fine and return to soup kettle, adding corn. Boil mixture 20 minutes, add butter, bread crumbs, salt and pepper. If mixture is too thick add an extra pint of boiling water. Pack into clean, hot BALL Jars, partly seal and process for 3 hours in a Hot-Water Bath or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal.

**Tomato Puree**

6 onions.
3 carrots.
3 stalks celery.
1 turnip.
3 sweet peppers.
½ peck tomatoes.

Run ingredients, except tomatoes, through a food chopper, cover with boiling water, and simmer until soft. Cut the tomatoes, do not peel, and bring to boiling point. Add the other ingredients and boil for 40 minutes, or until all parts are tender. Strain through a colander, season with salt and pepper, pour into clean, hot BALL Jars and seal at once.

**Tomato Pulp**

Take any amount of tomatoes desired. Blanch until skins loosen, cold-dip, remove skins and hard cores. Cook 30 minutes, press through a sieve, pack into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, partly seal and process 45 minutes in a Hot-Water Bath, or 30 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.

**Tomato and Corn Soup**

Prepare tomatoes and corn as for canning. Chop tomatoes into medium size pieces, or heat to simmering point and put through sieve. Mix thoroughly two parts tomatoes and three parts corn. Pack into clean, hot BALL Jars. Add one teaspoon salt to each quart, partly seal and process for three hours in Hot Water Bath or for ninety minutes in Steam Pressure Cooker at ten pounds. Remove from canner and seal immediately.

**Turkey Bone Soup**

The carcass of turkey or chicken makes a delicious and nutritious soup.

Scrape the meat from the bones. Break the bones, pack them in a kettle, cover with cold water, add a small onion, cover kettle and simmer gently for 3 hours. Strain and for each quart of stock add 1 cup cold meat. Pack into clean, hot BALL Jars, partly seal and process for 3 hours in a Hot-Water Bath or for 1½ hours in a Steam Pressure Cooker at 10 pounds. Remove from canner, seal immediately. Season to taste when serving.

**Vegetable Soup Mixture**

Use vegetables which suit the family taste. An excellent mixture is made with tomatoes, corn, carrots, celery and beans.

Prepare each vegetable as for canning, boil together vegetables which do not require peeling, for 5 minutes, pack immediately into clean, hot BALL Jars, add 1 level teaspoon salt to each quart, partly seal and process for 3 hours in a Hot-Water Bath, or for 90 minutes in a Steam Pressure Cooker at 10 pounds. Remove from canner and seal immediately.
JELLIES

JELLY MAKING has a special place of its own on the Housekeeping Calendar. Jelly is easy to make if certain rules are followed. It can be made from the fresh fruit juices in late summer and early fall, or from canned fruit juices in wintertime.

Jelly is the product obtained by combining the juice or combination of juices of certain fruits with the right proportion of sugar and cooking the mixture until it becomes a clear, tender, sparkling, transparent, quivering mold.

All fruit juices do not make perfect jelly. To make a good jelly it is essential that the fruit juice contain acid and a natural jelly-making substance called pectin, in proper proportions.

Some fruits contain proper proportions of acid and pectin to make perfect jelly. Other fruits are deficient in either pectin or acid. Juices from these fruits may be combined with fruit juices which contain sufficient pectin or acid to form a good jelly. Sugar is just as necessary as pectin and acid. Sugar is added but acid must be present in the fruit juice. Either cane or beet sugar may be used in making jelly. Fruits for jelly making in the order of desirability are: currant, crabapple, apple, quince, grape, blackberry, raspberry, and plum.

- Making the Jelly (Preparation)
  Select and wash fruit. Remove hulls, stems and blossom ends. Cut hard fruits into pieces without peeling or coring.

- Extraction of Juices
  For soft fruits, use just enough water to prevent them from sticking, or about one cup water to four quarts fruit. Heat gradually, mash while heating, and cook until the color begins to fade out of pulp.
  For hard fruits, cook with just enough water to cover, until the fruit is soft. Do not mash if you wish to have clear jelly. Strain juice through a wet double cheesecloth or cotton flannel bag, or well sterilized salt sack.
  Do not squeeze bag. Clear jelly can be obtained only when juice is extracted by dripping.
  A second extraction of juice may be made from the fruit. Return the pulp to kettle, add one cup water to each cup pulp, cook slowly for fifteen minutes, let stand for ten minutes. Strain through one thickness of cheesecloth, squeeze out all juice possible.
  By combining the first and second extractions of juice and straining through four thicknesses of cheesecloth a very satisfactory jelly will be obtained. It may be less clear than if the jelly is made exclusively from the first extraction of juice. The homemaker often marks the jelly made from the first extraction of juice for use on special occasions.
Cooking

To obtain best results in jelly making, it is advisable to work with a small quantity of juice. Two quarts of juice is a sufficiently large quantity to handle at one time. Measure juice, bring to vigorous boil, skim the juice and add sugar in proportion given in special recipes. Stir until sugar is dissolved. Cook rapidly for ten to fifteen minutes or until test shows jelly is done. It is unnecessary to skim again.

Jelly Test

To test the jelly, dip a spoon into the juice, cool slightly and allow to drop from the side of the spoon. If it sheet and tears off from the spoon in a distinct piece the jelly is done and should be removed from the fire immediately.

Sealing and Storing

Pour juice while hot into clean hot BALL Jelly Glasses. Fill the Glasses full as jelly shrinks as it cools. Cover at once with hot paraffin. When cold another layer of paraffin may be added if necessary. A small tea pot or pitcher with a spout is handy for pouring paraffin. When jelly is cold cover Jelly Glasses with Tin Lids or tight paper covers.

The preceding general directions for making jelly can be used for making all jellies. For combinations of fruits and sugar proportions consult table at end of this section.

Currant Jelly

Select currants that are not over-ripe. Remove all leaves and imperfect fruit, wash and drain the currants without removing stems, mash in a porcelain preserving kettle with spoon or wooden potato masher. Add one-half cup water to each two quarts of fruit. Boil mashed fruit slowly for eight to ten minutes, stirring frequently to prevent burning and to break up cells. Put the fruit into jelly bag and drain off the juice. Be careful not to press the fruit if clear jelly is desired. The draining may be hastened, however, by occasionally shaking the bag gently. After the juice is drained, measure it and to each cup juice add cup of sugar. Reheat slowly and as soon as it begins to boil test for jelly (see jelly test on this page). When the "two drops hang together," remove from fire and pour into BALL Jelly Glasses or Half Pint Jars. A second and third extraction of juice may be made as instructed in paragraph "Extraction of Juices."

Currant and Red Raspberry or Currant and Black Raspberry

Follow directions for Currant Jelly, using equal parts of currants and berries, with a cup of sugar for each cup of juice.

Apple or Crab-Apple Jelly

Take sour fruit. Do not core or pare, merely wash, wipe, and cut out blemishes. Cut up, pour over sufficient water to cover, and simmer until soft, then drain through a cheesecloth or cotton flannel bag, letting drip four or five hours. Measure the juice, bring to vigorous boil, skim and add ¼ cup sugar for each cup of juice. Stir until sugar is dissolved. The jelly will form in about twenty minutes. Rose geranium, mint, or other leaves may be used for flavoring, or orange blossoms preserved.

Cranberry Jelly

1 quart cranberries.
1 pint water.
½ cups sugar.

Wash cranberries. Place cranberries and water in preserving kettle. Cook for five minutes after they begin to boil. Drain through a single thickness, good quality, cheesecloth bag. Squeeze out juice and pulp. Add sugar and cook for fifteen minutes. Test for jelly. When the "two drops hang together" remove from fire and pour into BALL Jelly Glasses. Cover with paraffin.

Grape Jelly

Wash the bunches thoroughly, remove the fruit from the stems, put the grapes into preserving kettle, add ½ cup water to 2 quarts of grapes. Boil slowly until the grapes burst open and are soft enough to drain. Drain the juice through cheesecloth or cotton flannel bag. Measure the juice, bring to boil, skim and add one cup sugar to each cup juice. Cook the sweetened juice in porcelain kettle rapidly for about ten minutes or until a little of the juice hardens when cooled on a saucer. For green grape jelly the fruit should be gathered as soon as it begins to turn color.

Mint Jelly

Wash mint and chop fine. To each cup of chopped mint add ¼ cup sugar and ¼ cup water, and let stand for several hours, or over-night. Bring to boiling point, then strain. Combine sugar and apple juice, using ½ cup sugar to 1 cup apple juice. Cook and test for jelly, and when the jellying point is obtained, add green vegetable coloring and 1 or 2 tablespoons of prepared mint juice for each quart of apple juice.

Mint jelly is a favorite accompaniment for Roast Lamb.

Quince Jelly

Quinces have too little acid and too much pectin to make a desirable jelly when the juice alone is used. An equal amount or twice as much tart apple improves the flavor. Equal parts of cranberry, quince and apple juice give a jelly of rich, red color and delicious flavor.

Cut the quinces into small pieces, do not pare, but remove the core and seeds, as they prevent the jelly from forming correctly. Add sufficient water to cover and cook until tender. Quinces require long cooking to become tender and to bring out their flavor and deep, rich color. Drain off juice. Use ⅛ as much sugar as fruit juice. Follow general directions for making jelly.

The pulp may be used for making conserve or butter.

Bar-Le-Duc

1 pound large currants.
2 pounds sugar.

Add sugar to currants which have been washed and stemmed and let boil slowly for 5 minutes. Pour into hot, clean BALL Jelly Glasses, cover and keep in a dry, cool place.

The best jar is the cheapest
### Jelly Table

**Approximate Proportions of Sugar and Fruit Juice for Jelly**

(Showing Fruit Juices and Approximate Proportions of Each Which Will Combine to Make Good Jelly)

<table>
<thead>
<tr>
<th>Fruit Juice</th>
<th>Combine in Following Proportions</th>
<th>Fruit Juice Cups</th>
<th>Sugar Cups</th>
<th>Predominant Flavor</th>
<th>Predominant Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td></td>
<td>1</td>
<td>¾</td>
<td>Apple</td>
<td>Light</td>
</tr>
<tr>
<td>Apple</td>
<td></td>
<td>1</td>
<td>¾</td>
<td>Blackberry</td>
<td>Dark</td>
</tr>
<tr>
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<td></td>
<td>1</td>
<td>¾</td>
<td>Blueberry</td>
<td>Dark</td>
</tr>
<tr>
<td>Apple</td>
<td></td>
<td>1</td>
<td>¾</td>
<td>Black Raspberry</td>
<td>Dark</td>
</tr>
<tr>
<td>Blueberry</td>
<td></td>
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<td>¾</td>
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<td>1</td>
<td>¾</td>
<td>Quince</td>
<td>Light</td>
</tr>
<tr>
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<td></td>
<td>1</td>
<td>¾</td>
<td>Cranberry</td>
<td>Dark</td>
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<tr>
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<td></td>
<td>1</td>
<td>¾</td>
<td>Rhubarb</td>
<td>Light</td>
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<tr>
<td>Apple</td>
<td></td>
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<td>Dark</td>
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<td>¾</td>
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<tr>
<td>Grape (Under-ripe)</td>
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<td>1</td>
<td>¾-1</td>
<td>Grape</td>
<td>Dark</td>
</tr>
</tbody>
</table>

- **Jelly Fruits**
  
The juices from the following fruits will readily convert into jelly:
  - Green Apple, Crab-Apple, Unripe Grapes, Blackberries, Currants, Gooseberries, Raspberries (slightly under-ripe), Cranberries, Huckleberries, Quinces, Plums.
  
  Juices from Strawberries, Peaches, Pineapples, Cherries, Rhubarb, Pears and Sweet Apples lack either Pectin or Acid and must be combined with other juices to make good jelly. Consult above Jelly Table for juice combinations.

- **Commercial Pectins**
  
  Commercially made pectins of standard quality can be purchased in practically all leading grocery and drug stores.
  
  Directions for using are usually specified on each bottle, or are supplied in additional booklet or circular form at the time of purchase.

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*Ball Jelly Glasses*
A FRUIT BUTTER is the product resulting from cooking fruit pulp with sugar (with or without spices) to the consistency of thick paste, suitable for spreading. Less sugar is used for butters than for jams and marmalades. Butters require slow cooking and frequent stirring to prevent burning when cooked on top of the stove. If cooked in the oven, they require only occasional stirring.

**Blueberry and Apple Butter**

Use tart apples. Remove stems but do not pare apples. Cook in sufficient water to cover, until soft, and press through a strainer. Use equal parts of berries and apple pulp and \( \frac{1}{2} \) as much sugar as fruit. Cook the butter until it is thick and clear and seal immediately in hot, clean BALL Jars.

**Cider Apple Butter**

Use sweet cider of good quality, and apples that cook easily. Boil the cider down one-half. Wash, peel, quarter and core the apples. Then boil together rapidly equal amounts of apples and boiled-down cider. If the boiling is slow the apples at once sink to the bottom and are liable to scorch. After the first two hours, constant and vigorous stirring is necessary to prevent burning. If the butter becomes too thick before it is perfectly smooth, add a little more cider and continue the boiling and stirring. Add sugar at any time after the stirring begins if the butter is not sweet enough. Spice the butter to suit the taste and seal it in BALL Jars. Apple butter is usually considered better if not highly spiced.

**Crab-Apple Butter**

Wash and cut apples into quarters, without paring or coring. Place them in a preserving kettle with just enough water to cover, and cook slowly until tender. Press through a colander or sieve. Measure the strained pulp. Add \( \frac{1}{2} \) as much sugar as pulp to the juice in which the apples were cooked. Bring to boil, add pulp and cook until mixture is thick and smooth, stirring to prevent burning. Spices may be added, if desired. Pack into clean, hot BALL Jars. Seal immediately.
• Spiced Grape Butter

    Wash grapes, remove stems, separate the pulp from the skins, and let stand overnight. Heat pulp to boiling point and drain through a colander. Add the skins to pulp and to each 5 pints of fruit add 5 cups brown sugar and ½ tablespoon of cloves and 1 of cinnamon. Boil the mixture 1 hour, add 1 cup cider vinegar and continue boiling until mixture is thick. Stir constantly to prevent burning. Pack butter into clean, hot BALL Jars and seal immediately.

• Grape and Apple Butter

    1 pint grape pulp.
    1 pint apple pulp.
    2 cups sugar.

    Prepare the fruit pulp in the usual way by cooking the fruit and pressing it through a sieve. Combine the ingredients and cook mixture until it is thick (about 20 minutes). Seal in hot, clean BALL Jars.

• Tomato and Apple Butter

    1 pint tomato pulp.
    1 pint apple pulp.
    1 orange, juice and grated rind.
    3 cups sugar.
    1 small stick cinnamon.

    Combine ingredients and cook the mixture until it is thick and clear. Seal in clean, hot BALL Jars.

• Muskmelon Butter

    Select ripe muskmelons. Cut in halves, remove rinds, seeds and soft parts. Place the melons in a preserving kettle with as little water as possible and boil until tender. Press through a colander and measure the pulp. To each quart of pulp add ½ cup sugar, juice of ½ lemon and a little cinnamon if desired. Continue boiling until mixture is thick enough to spread. Stir constantly to prevent burning. Pack hot butter into clean, hot BALL Jars.

• Peach Butter

    Peel and stone peaches. Cook in as small amount of water as possible until they are reduced to a pulp. Add ½ as much sugar as pulp and cook mixture until it is thick and clear, stirring frequently to prevent burning. Spices may be added if desired. Pack into clean, hot BALL Jars, and seal at once.

• Pear Butter

    Wash pears, cut into quarters and without peeling boil them until they fall to pieces. Press through a colander to remove cores, seeds and stems. Measure pulp and add one cup sugar to each quart pulp. The addition of one-half teaspoon vanilla or juice of one-half lemon to each quart gives a pleasing flavor. Add spices to suit taste. Cook mixture slowly until it becomes smooth and thick, stirring frequently to prevent burning. Pack hot butter into clean, hot BALL Jars. Seal immediately.

• Plum Butter

    Cook plums in sufficient cold water to cover them. Drain and reserve the juice for jelly. Press plums through a colander, measure pulp and add ½ as much sugar as pulp. Cook mixture slowly until it is thick and clear, stirring to prevent burning. Seal in clean, hot BALL Jars.

When plums are not plentiful, apple pulp may be substituted for ¼ the measure of plum pulp.

• Blueberry and Apple Conserve

    1 pint blueberries, fresh or canned.
    1 pint tart apple, diced.
    3 cups sugar.
    Juice of 1 lemon.
    Grated rind of ½ lemon.

    Combine ingredients and cook mixture until thick and clear, stirring to prevent burning. Pour immediately into clean, hot BALL Jars and seal at once.

• Carrot, Apple and Peach Conserve

    2 quarts pitted cherries.
    1 pound ground pineapple.
    1 pound raisins, chopped fine.
    2 cups English walnuts.

    Run the pineapple through a food chopper and mix the remaining fruit and sugar and let stand overnight. Mix ingredients and simmer until mixture is clear, stirring to prevent burning. Pack into clean, hot BALL Jars and seal at once. Nuts may be omitted, if desired.

• Cherry, Pineapple and Apple Conserve

    2 cups diced English walnuts.
    3 quarts gooseberries.
    1 pound raisins, chopped fine.
    2 cups chopped English walnuts.

    Mix ingredients and simmer until mixture is clear, stirring to prevent burning. Pack into clean, hot BALL Jars and seal at once. This recipe makes a tart conserve which is excellent to serve with meat.

• Sour Cherry and Currant Conserve

    2 quarts pitted sour cherries.
    1 pound ground pineapple.
    1 pound raisins, chopped fine.
    2 cups English walnuts.

    Wash and pick over the currants. Crush cherries and place in the bottom of a preserving kettle. Arrange fruit and sugar in alternate layers and let stand overnight. Cook mixture slowly until it thickens. Pour into clean, hot BALL Jars and seal at once. This recipe makes a tart conserve which is excellent to serve with meat.

Plant a vegetable garden

Conserves

A CONSERVE is a mixture of several fruits and is made like jam. It may contain nuts or raisins or both, or it may be made without nuts or raisins.
• Gooseberry Conserve (Old English Recipe)
  5 pounds gooseberries (large English preferred).
  8 cups sugar.
  4 oranges—juice and chopped rind.
  1 1/2 pounds seedless raisins.
Mix ingredients and boil until thick (about 45 minutes). Pack hot conserve into clean, hot BALL Jars and seal immediately.

• Grape Conserve
  3 pounds seeded grapes.
  1 pound English walnuts (broken into small pieces).
  6 cups sugar.
Cook grapes and sugar together as for jam. The juice of 1 orange and the peel of 1/2 orange, cut in small pieces, may be added for variation. Add nut meats 5 minutes before removing from the fire. Seal in clean, hot BALL Jars.

• Peach Conserve
  1 pound peach-pulp.
  1 1/2 cups sugar.
  1 lemon—juice and grated rind.

• Peach and Apple Conserve
  Use equal parts of peaches and apples (diced). If apple skins are of good color do not peel apples. Add 3 times as much sugar as fruit. Cook mixture slowly until it is thick and clear. Seal in clean, hot BALL Jars.

• Peach and Cantaloupe Conserve
  1 pint diced peaches.
  1 pint diced cantaloupe.
  3 cups sugar.
  2 lemons, juice and grated rind.
  3/4 cup English walnuts, blanched and chopped fine.
Combine ingredients with exception of the nuts. Cook mixture until it is thick and clear, add nuts and pour into clean, hot BALL Jars. Seal at once.

• Peach and Pineapple Conserve
  2 cups diced peaches.
  1 cup cooked pineapple.
  2 1/2 cups sugar.
  1 orange, juice and grated rind.
  1 lemon, juice and grated rind.
Combine ingredients and cook until mixture is thick and clear, stirring to prevent burning. Pour into clean, hot BALL Jars. Seal immediately.

• Pear and Apple Conserve
  1 pint diced pears.
  1 pint diced tart apple.
  1 lemon, juice and grated rind.
  1 cup seedless raisins.
  3/4 cup English walnuts.
  3 1/2 cups sugar.
Wash raisins and add to other ingredients except nut meats. Cook until mixture is thick and clear. Add nut meats 5 minutes before removing from fire. Pack in clean, hot BALL Jars, and seal at once. A small amount of preserved ginger may be substituted for the nuts.

• Pineapple and Apple Conserve
  1 pint pineapple, diced or shredded.
  1 pint diced tart apple.
  1 orange, juice and grated rind.
  3 cups sugar.
  3/4 cup shredded cocoanut.
Cook the pineapple in water until tender. Add the apple, orange juice, and rind, and the sugar. Cook mixture until it is clear and transparent. Add cocoanut and pack conserve into clean, hot BALL Jars. Seal at once.

• Plum Conserve
  1 pound plum pulp (use Damson plums).
  1 to 1 1/2 cups sugar.
  1/2 lemon, juice and grated rind.
  1/2 orange, juice and grated rind.
  1 cup seeded raisins.
  1/2 cup nut meats (if desired).
Wash plums, seed if desired, and weigh. Mix ingredients, except nut meats, and cook mixture until thick and clear. Add nut meats. Pack into clean, hot BALL Jars and seal immediately.

• Damson Plum Conserve
  2 pounds Damson plums.
  1 cup English walnuts.
  1 lemon, juice and grated rind.
  1 pound seedless raisins. 3 cups sugar.
Wash raisins. Remove seeds from the plums and weigh the fruit. Add sugar, lemon and raisins. Cook mixture until it is thick and clear. Pour boiling water over nuts and let stand for 2 minutes. Drain water from nuts, cut or chop them and add to mixture just before removing conserve from stove. Pour conserve into clean hot BALL Jars and seal at once.

• Quince, Apple and Cranberry Conserve
  2 cups apple pulp.
  1 cup quince pulp.
  1 cup cranberry pulp.
  1 cup raisins. 2 1/2 cups sugar.
Mix ingredients and boil for 5 minutes then add raisins. Continue boiling until mixture is thick and clear. Pack into clean, hot BALL Jars and seal at once.

• Quince, Apple and Cranberry Conserve
  2 cups quince pulp.
  2 cups cranberry pulp.
  2 cups apple pulp.
  1 orange, juice and grated rind.
  3/4 cup English walnuts. 4 cups sugar.
Combine ingredients, except nuts, and boil mixture rapidly until thick. Pack into clean, hot BALL Jars and seal at once. If walnuts are used, chop them and add to mixture just before conserve is removed from stove.
• Black Raspberry and Cherry Conserve
  1 cup pitted cherries.
  1 cup black raspberry pulp. 2 cups sugar.
  Cook cherries in a small amount of water until skins are tender. Add raspberry pulp and sugar, and cook mixture until it is thick and clear. Pour into hot BALL Jars and seal at once.

• Red Raspberry and Cherry Conserve
  1 cup cherries.
  1 cup red raspberries. 1 1/2 cups sugar.
  Cook cherries in a small amount of water until skins are tender. Add raspberries and sugar and cook until mixture is thick and clear. Pack into clean, hot BALL Jars and seal at once.

• Rhubarb Conserve
  2 cups rhubarb, cut fine. 2 cups sugar.
  1 orange, juice and grated rind.
  1 lemon, juice and grated rind.
  1/2 cup blanched nuts cut in small pieces.
  Combine ingredients, except nuts, and heat mixture until sugar is dissolved. Boil rapidly until it is thick and clear. Add nuts; pour into clean, hot BALL Jars and seal at once.

• Rhubarb and Apple Conserve
  2 cups sugar. 1/2 cup water.
  2 cups rhubarb, cut in small pieces.
  1 cup apple, sliced.
  1/3 cup English walnuts, chopped.
  Make a syrup of sugar and water and when boiling add fruit and simmer until mixture is thick and clear.

• Strawberry and Rhubarb Conserve
  1 quart strawberries.
  1 quart rhubarb. 6 cups sugar.
  Cut rhubarb into 1/2-inch pieces, being careful not to peel. Mix together strawberries, rhubarb and sugar, and cook mixture slowly until it is thick and clear. Pour into clean, hot BALL Jars and seal at once.

• Tomato Conserve
  1 quart tomatoes, fresh or canned (drain off juice).
  1 cup seedless raisins.
  1 lemon, cut in small pieces.
  1/2 cup English walnuts. 4 cups sugar.
  Wash raisins. Blanch, peel and core fresh tomatoes. Mix ingredients, except nuts, and cook mixture until it is thick and clear. Add nuts, chopped fine, and pour mixture into clean, hot BALL Jars and seal at once.

• Tomato and Apple Conserve
  1 pint tomato, fresh or canned (drain off juice).
  1 pint apple, diced.
  1 lemon, cut in small pieces. 3 cups sugar.
  Blanch, peel and core fresh tomatoes. Combine ingredients and cook mixture until it is thick and clear. Pour into clean, hot BALL Jars. Seal at once.

Add nuts and pack conserve into clean, hot BALL Jars and seal immediately.
JAMS

A JAM is a variation of a preserve. The product is cooked to a thick mass and the proportion of sugar used is less than the amount used for preserves. For Jam use ½ to ¾ pound sugar to 1 pound fruit. Jams need constant stirring to prevent burning.

• Blackberry Jam

Mash berries, cook them in their own juice until thoroughly heated, then press through a sieve to remove seeds. Measure the pulp and liquid, and for every pint of pulp add 1 cup of sugar. Cook rapidly until thick, stirring to prevent burning. Pack into clean, hot BALL Jars and seal immediately.

• Blueberry and Crab-Apple Jam

Equal measures of canned blueberries and crab-apples may be used, or ½ as much berries as crab-apples. Remove cores from crab-apples, but do not pare them. Grind in food chopper. Add just enough water to cover apples, and cook for 10 minutes. Add blueberries and sugar, using ½ as much sugar as fruit, by measure. Cook mixture until thick, and pack immediately into clean, hot BALL Jars and seal at once.

• Kumquat Jam

Slice kumquats. Cook until tender in just enough water to keep from burning. Measure and add equal parts of sugar with a little lemon juice. Cook mixture until thick, stirring to prevent burning. Pack hot jam into clean, hot BALL Jars. Seal immediately.

• Peach Jam

1 pound peach pulp (imperfect peaches may be used). ½ to ¾ pound sugar. ⅔ cup peach juice or water. ½ in. ginger root. 1 peach pit. ½ teaspoon allspice. 1 teaspoon cinnamon bark.

Blanch peaches in boiling water, cold-dip and remove skins and seeds. Mash pulp. Add sugar and spices (tied in a bag). Cook until mixture is thick and clear. Remove spice bag. Pack into clean, hot BALL Jars and seal immediately.

Note: Spices may be omitted. Apple pulp may be substituted for part of peach pulp. Instead of spices, juice of 1 lemon and 12 peach pits may be added.

• Plum Jam

1 pound plums (Damson plums are best). ½ to ¾ pound sugar.

Wash plums and remove seeds, if desired. The flavor of the seeds is sometimes preferred. Add sugar, and cook until mixture is thick and clear (about 218° F.). Pack immediately into hot, clean BALL Jars and seal at once.

• Raspberry Jam

Wash raspberries and crush them. Weigh the crushed berries and add an equal weight of sugar. Boil mixture until it is thick and clear. Long boiling should be avoided, because it makes the jam dark and strong. Pack hot into clean, hot BALL Jars. Seal immediately.

• Strawberry Jam

Pick over berries and remove hulls. Weigh berries, and for every pound of fruit allow ¾ pound of sugar. Place berries in a preserving kettle and mash fruit as it heats. Bring fruit to boiling point, stirring frequently and crushing any berries which still remain whole. Add sugar to the fruit and boil together until thick (not over 20 minutes), stirring to prevent burning. Pack into clean, hot BALL Jars and seal immediately.

MARMALADES

Marmalades are usually made from citrous fruits, oranges being the most common fruit used, but other fruits may also be used.

• Carrot and Orange Marmalade

6 carrots. 3 oranges. 1 lemon, juice and grated rind. Sugar. Dice the carrots and cook until tender, using as little water as possible. Cut oranges and the lemon into small pieces. Combine the carrot and fruit, measure and add ¾ as much sugar as mixture. Simmer mixture until it is clear. Pack hot into clean, hot BALL Jars, and seal at once.

• Cherry and Pineapple Marmalade

Wash, drain, seed the cherries and run them through a meat grinder. Peel and grind or shred the pineapple. Mix pineapple with cherries using ⅔ as much pineapple as cherries. To the mixture add ½ as much sugar as there is fruit and juice. Cook this mixture until it is clear and thick, stirring to prevent burning. Pour hot marmalade into clean, hot BALL Jars. Seal immediately.

• Fig Marmalade

This can be made from the bruised and soft figs, by mashing the fruit well. Place figs in a little water, bring to a boil, measure fruit, add same amount of sugar as fruit and cook for 1 hour, stirring to prevent burning. Pack hot marmalade into clean, hot BALL Jars and seal immediately.

• Gooseberry Marmalade

Stem and wash berries. Place berries in a preserving kettle containing enough water to cover bottom. Cook slowly until berries are soft. Measure mixture and add same quantity of sugar as pulp. Boil...
until mixture is thick (about 20 minutes). Stir constantly to prevent burning. Pack hot marmalade into clean, hot BALL Jars and seal immediately.

• Gooseberry and Rhubarb Marmalade

STEM, wash and mash gooseberries. Add any proportion of young rhubarb, cut into pieces, desired. Place mixture into preserving kettle containing just enough water to cover bottom of kettle. Let fruit simmer until soft. Measure mixture and add ¾ as much sugar as mixture. Boil until mixture is thick (about 20 minutes), stirring to prevent burning. Pack hot marmalade into clean, hot BALL Jars. Seal immediately.

• Grape Marmalade

Wash grapes and remove stems. Press pulp from the skins. Cook pulp and press through a sieve to remove seeds. Add the skins to pulp, measure mixture and allow ½ as much sugar as pulp. Cook mixture until skins are tender (about 20 minutes), and seal at once in clean hot BALL Jars.

• Grapefruit Marmalade

1 pound grapefruit pulp.
1 quart water. 1¼ cups sugar.
½ pound grapefruit peel.
Wash fruit and remove the peel. Select ¾ pound of peel that is free from blemishes and cut it into thin slices. Cover with water and boil for 10 minutes. Drain, cover with boiling water and repeat the process four or five times to remove the bitter flavor.

Weigh the fruit pulp and slice it. Cover with water and boil until tender. Pour into a flannel jelly-bag, press until no more juice can be obtained, and filter the juice through another clean flannel jelly-bag without pressing. To the juice add the sliced peel and sugar, and boil rapidly until mixture reaches the jellying point. Pack into clean hot BALL Jars. Seal immediately.

• Guava Marmalade

Use well ripened or over-ripe guavas. Slice. Place with a little cold water in a kettle. Cook until soft, and press through a coarse sieve. Measure pulp and add ¾ as much sugar as pulp. Add juice of 1 lemon to each pint of pulp. Cook mixture until thick. Pack hot marmalade into clean, hot BALL Jars. Seal immediately.

• Orange Marmalade

12 thin-skinned oranges.
3 lemons. 3 quarts of water.
16 cups (8 pounds) sugar.
Wash and slice oranges and lemons as thin as possible. Add water and let stand over night. Cook slowly until tender (2 to 2½ hours). Add sugar. Cook the mixture until it jellies from a spoon (from 30 to 60 minutes). Pour into clean, hot BALL Jars and seal at once.

• Quince Marmalade

Cut and quarter unpeeled quinces. Put in kettle and just cover with water. Let cook until tender. Press through a sieve, measure and add ¾ as much sugar as pulp. Cook this slowly until quite stiff, stirring frequently to avoid burning. Pack into clean, hot BALL Jars. Seal immediately.

• Quince and Apple Marmalade

Wash quinces and remove blossom end. Cut fruit into small pieces. Place in just enough water to cover and cook until soft. Press through a sieve and combine pulp with an equal measure of tart apple pulp. Add ½ as much sugar as pulp. Cook mixture until it is thick and clear (about 25 minutes). Pack into clean, hot BALL Jars and seal immediately.

• Black Raspberry Marmalade

SELECT fresh, ripe raspberries, wash them carefully, heat thoroughly and press through a colander to remove seeds. Add ¾ as much sugar as pulp, and boil the mixture until it is thick. Stir constantly to prevent burning. Pack the marmalade into clean, hot BALL Jars. Seal immediately.

• Red Raspberry Marmalade

Wash and drain berries, mash thoroughly, place them in a preserving kettle with as little water as possible and bring quickly to boil. Press mixture through a fine-mesh sieve to remove seeds. Measure mixture and add ¾ as much sugar as the e is pulp and juice. Boil gently for 10 minutes. Pour hot marmalade into clean, hot BALL Jars. Seal immediately.

• Raspberry and Currant Marmalade

4 quarts red raspberries.
1 quart red currants. Sugar.
Wash berries and currants and place in a preserving kettle. Mash fruit thoroughly, add ¾ as much sugar as fruit and boil mixture for 10 minutes or until it jells when cooled. Stir constantly to prevent burning. Pack hot marmalade into clean, hot BALL Jars. Seal immediately.

• Rhubarb Marmalade

Cut young stalks of rhubarb into 1-inch lengths. Do not peel. Weigh rhubarb and add ¾ pound sugar to each pound rhubarb. Place rhubarb and sugar in a preserving kettle, heat slowly and boil mixture until thick and clear. Pack into clean, hot BALL Jars. Seal immediately.

• Rhubarb and Pineapple Marmalade

3 pounds strawberry rhubarb.
4 cups sugar.
2 lemons, juice and grated rind.
1 cup pineapple, cut in pieces.
Combine ingredients and boil mixture slowly until it is thick and clear. Pack into hot BALL Jars and seal immediately.

• Tomato Marmalade

1 quart ripe tomatoes.
½ cup cider vinegar.
¾ cup sugar. 1 teaspoon salt.
1 teaspoon mixed spices.
To 1 quart ripe tomatoes, skinned and sliced, add ½ cup cider vinegar, ½ cup sugar, 1 teaspoon salt and 1 teaspoon mixed spices. Cook mixture slowly until it is thick, stirring to prevent burning. Pack into clean, hot BALL Jars. Seal immediately.
Preserves

A good preserve is one in which the fruit or pieces of fruit remain whole, tender, clear and plump, in a thick, transparent syrup. The approximate proportion of sugar to fruit in preserves is three-fourths of a pound of sugar to one pound of fruit.

Apricot and Pineapple Preserves

4 quarts fresh, ripe apricots.
1 quart shredded pineapple.
⅛ cup almonds.
4 cups sugar. 4 cups water.

Wash apricots, do not peel. Shred fresh pineapple and add to apricots. Place in a medium thin, boiling syrup made with 1 part sugar to 1 part water. Cook slowly until mixture is tender (about 30 minutes). Add almonds, if desired. Pack hot into clean, hot BALL Jars. Seal immediately.

Blackberry Preserves

Follow the direction for preserved Strawberries (either method); see page 42.

Barrier Cherries

Wash and seed cherries, drain thoroughly in colander, place in earthen jar and cover with vinegar. Let stand 12 hours. Measure cherries and add an equal amount of sugar. Let stand for 10 days, stirring each morning. Remove cherries to clean, hot BALL Jars and seal. Delicious with meats or salads.

Maraschino Cherries

Wash, remove stems and pits from cherries. Save juice, pits and cherries. Place cherries in a shallow pan and cover with a medium thick syrup made with 3 parts sugar to 2 parts cherry juice or water. Boil gently for 10 minutes; remove from heat and let stand in a covered kettle from 6 to 12 hours. Drain off the juice from cherries and pack cherries into clean, hot BALL Jars. Heat the remaining syrup and fill the jars with the boiling syrup. Seal at once.

Preserved Cherries with Currants

2 quarts seeded cherries.
1 pint stemmed currants.
5 pounds sugar. 1 quart water.

Make a thick syrup using 5 pounds sugar to 1 quart water. Add 2 quarts seeded cherries and 1 pint stemmed currants to boiling syrup. Cook mixture slowly for 30 minutes. Pack hot into clean, hot BALL Jars. Seal immediately.
• **Preserved Citron Melon**
  
  5 melons.
  5 cups sugar. 1 cup water.
  2 lemons. Ginger root.

  Peel melons, cut into slices and boil until tender, in a syrup made in proportion of 5 cups sugar to 1 cup water. Add the juice of 2 lemons with grated rind of 1 lemon to the boiling mixture. A little ginger root may be added if desired. Cook for 20 minutes, and pack hot into clean, hot BALL Jars. Seal immediately.

• **Preserved Crab-Apples**

  SELECT perfect, well-colored crab-apples, wash thoroughly, remove blossom ends, leaving stems and skins. Place apples in a thick, boiling syrup made in proportion of 3 parts sugar to 1 part water. Cook gently until tender (about 30 minutes). Pack hot into clean, hot BALL Jars, cover with boiling syrup and seal immediately.

  Crab-apple preserves are superior in color, shape and flavor to other apple preserves.

• **Preserved Figs**

  WASH and stem currants. Place in a boiling syrup using 3 parts sugar to 1 part water. Boil gently for 15 minutes and pour immediately into clean, hot BALL Jars. Seal at once.

• **Preserved Currants**

  Place currants in a thick boiling syrup made with 3 parts sugar to 1 part water. Boil until the mixture becomes a medium thick syrup. Add the fruit, juice of 2 lemons and 1 lemon sliced thin. Cook mixture until it thickens or jellies after standing. Pack into clean, hot BALL Jars.

• **Preserved Ginger**

  WASH ginger roots and boil gently until tender. Soak in cold water, changing water frequently. Make a thin syrup using 2 parts sugar to 1 part water. Pour syrup over ginger roots and let stand for 5 days. Pack into clean, hot BALL Jars and fill jars with boiling syrup which has been boiled down until thick. Seal immediately. Add spices if desired.

• **Gooseberry Preserves**

  1 pound green gooseberries.
  2½ cups sugar.

  Wash berries, stem, and remove blossom ends. Half cover the gooseberries with water and simmer until skins are soft. Add sugar and bring mixture quickly to boiling point and cook until clear. Pack into clean, hot BALL Jars. Seal immediately.

• **Kumquat Preserves**

  WASH kumquats. Place halved, or whole, into boiling, thick syrup made with 3 parts sugar to 1 part water. Boil until tender. Pack into clean, hot BALL Jars. Cover with boiling syrup. Seal immediately.

• **Mixed Fruit Preserves**

  1 pound quinces. 1 pound sweet apples.
  1 pound pears. 1 pound peaches.
  3 lemons. 6 cups sugar.

  Do not remove skins. Slice the fruit. Cook apples, pears, and quinces separately until tender. Drain off the juice from each, and add it to the sugar. Boil the mixture until it becomes a medium thick syrup. Add the fruit, juice of 2 lemons and 1 lemon sliced thin. Cook mixture until it is thick and seal at once in clean, hot BALL Jars.

• **Muskmelon Preserves**

  PARTIALLY green melons make delicious preserves, but they should be soaked in stronger salt-water than that used for watermelons.

  Proceed same as for Watermelon Preserves, see recipe page 42.

• **Peach Preserves**

  2 pounds peaches.
  3 cups sugar. 2 cups hot water.

  Blanch, remove skins and cut peaches into halves. Make a thick syrup, using 2 parts sugar to 1 part water. Cook peaches in the syrup until they are clear and the syrup is thick. Pack into hot, clean BALL Jars and seal at once.

• **Pear Preserves**

  1 pound pears. 2 cups sugar.
  2 cups water. 1 lemon, sliced thin.

  The fruit may be preserved whole, in halves or in quarters.

  Boil sugar and water together for 5 minutes, add pears and sliced lemon and cook until pears are clear and transparent, and the syrup is thick. Pack into clean, hot BALL Jars and seal at once.

  If hard pears, such as Keifers, are used, cook them in water until tender, using the water in which they are cooked, for making the syrup.

  A few cloves or a stick of cinnamon may be added for flavor. Using pineapple juice instead of water in the syrup gives a delicious flavor.

• **Pineapple Preserves**

  Pare the pineapple and remove the eyes. Shred with a silver fork or cut in small pieces, discarding the core. Place pineapple in a preserving kettle and add ¾ as much sugar as pineapple. Allow mixture to stand until a syrup is formed. Cook the mixture slowly until the pineapple becomes transparent. Transfer to hot BALL Jars, fill with boiling syrup and seal immediately.

• **Plum Preserves**

  6 pounds plums.
  9 cups sugar. 1 cup water.

  Select small purple plums and be sure they are sound and not over-ripe. Remove stems, wash and pierce each plum with a fork. Place plums in an earthen bowl or jar, cover with sugar and add water. Cover vessel and let stand in a cool place overnight. Drain plums and boil the juice for 5 minutes. Add plums and cook for a few minutes until clear. Care should be taken not to over-cook, as the syrup thickens or jellies after standing. Pack into hot, clean BALL Jars and seal immediately.
**Pumpkin Preserves**

5 pounds pumpkin. 8 cups sugar.
3 lemons. 1 teaspoon salt.

Cut pumpkin into slices 1/4 inch thick and from 1 to 2 inches long. Place in an earthen bowl or preserving kettle, add the sugar and let stand overnight. Drain and boil the liquid until it threads. Add the pumpkin, thinly sliced lemons and salt. Cook mixture until it is thick and clear. Pack immediately into hot BALL Jars and seal at once.

**Quince and Apple Preserves**

1 pound fruit, quince and sweet apple.
1 1/2 cups sugar. Water.

Cook quinces until tender in about 4 times their measure of water. Pare sweet apples and cut them into medium thick slices and cook in a small amount of water until tender. Drain off the juice from both apples and quinces, add sugar to the juice and boil mixture for 5 minutes. Add fruit and boil mixture until it is thick and clear. Pack immediately into hot BALL Jars and seal at once.

**Raspberry Preserves**

Mix thoroughly equal parts of raspberries and sugar. Cook slowly and stir until mixture boils. Boil gently for 6 minutes and pour into clean, hot BALL Jars and seal at once.

**Rhubarb Preserves**

1 quart rhubarb, cut in small pieces.
3 cups sugar. 1 cup water.

Boil sugar and water together until the syrup becomes brittle when dropped into cold water. Drop rhubarb into the boiling syrup and cook mixture until it is thick and clear. Pour into clean, hot BALL Jars and seal at once.

**Rhubarb and Fig Preserves**

3 1/2 quarts rhubarb. 8 cups sugar.
1 pint chopped figs. 1 lemon.

Cut rhubarb into small pieces, add sugar and let mixture stand overnight. In the morning boil until thick and add 1 pint of chopped figs and the juice and rind of 1 lemon. Cook rapidly until mixture is thick and clear. Pack while hot, into clean, hot BALL Jars. Seal immediately.

**Strawberry Preserves**

Mix equal measures of strawberries and sugar, and stir mixture until it boils. Boil gently for 6 minutes, pour into clean, hot BALL Jars. Seal at once.

**Strawberry Preserves**

Use firm, ripe strawberries. Take two quarts (do not increase quantity) and scald them, leaving them in the boiling water 2 minutes, then drain. Add four cups of sugar and boil two minutes, counting the time after the entire contents of the pan is bubbling. Remove from fire and after bubbling has stopped add two more cups of sugar and boil for five minutes. Count time as specified, after which pour into shallow pans so the preserves will not stand over one and one-half to two inches deep in the pan. Let stand over night, next morning pack the cold preserves in sterilized BALL Jars and seal with Caps and Rubbers in the usual way. This method of scalding keeps the berries plump and retains the color.

**Tomato Preserves**

5 pounds ripe tomatoes.
8 cups sugar. 2 lemons.

Scald and peel tomatoes. Place in a crock or enameled bowl, add sugar and let stand over night. Drain off the juice and boil it rapidly until it threads. Add the tomatoes and lemons sliced thin, and cook until the mixture is thick and clear. Pack into clean, hot BALL Jars and seal immediately.

The preserves should be a rich, red color.

**Watermelon Preserves**

1 watermelon.
Alum (dissolved).
2 lemons. Sugar. Spices.

Peel and cut into slices the rind of one watermelon, soak slices in a weak salt solution (1 tablespoon salt to 1 quart water) overnight. Drain off the water and parboil the watermelon rind for a few minutes in water containing a pinch of dissolved alum. Drain the slices again. Make a heavy syrup using 3 parts sugar to 1 part water, add 2 lemons, sliced thin, and add whatever spices are desired (cinnamon, allspice, ginger and cloves). Place watermelon in the boiling syrup and boil slowly until tender. Pack into clean, hot BALL Jars. Seal immediately.

**Crab-Apple Honey**

Wash crab-apples, remove cores and any defective spots, but do not pare. Cut apples into small pieces or run through a food chopper. Place apples, which have been cut into small pieces, or run through a food chopper, in a preserving kettle with water to cover. Boil for 10 minutes. Measure the pulp and add 3/4 as much sugar as pulp. Cook the mixture until it is clear, and has a jelly-like consistency. Seal in clean, hot BALL Jars.

**Carrot Honey**

1 pint grated raw carrot.
1 lemon, grated rind.
2 lemons, juice. 2 cups sugar.

Mix ingredients well, heat slowly and simmer the mixture until it is thick and clear. Pack into clean, hot BALL Jars and seal at once. Serve with cold meat.
**Pickles**

The tang of crisp spiced pickles or relish adds interest and palatability to any meal and used in moderation, they play an important part in the dietary because they stimulate the flow of saliva and gastric juices, thus aiding digestion.

Success in “making pickles” is determined largely by the kind of vinegar used. Best results will be secured if a high grade cider vinegar diluted one half with water is used.

Sweet pickles may be made from many fruits, fresh, canned or dried, as well as from a few vegetables. Green or slightly under-ripe fruits and vegetables make firmer, crisper pickles than those which have fully matured. A spicy syrup is used as the foundation for any variety.

Spices should be bought fresh for each year’s pickling. A mixture of spices commonly known as “pickling spice” may be obtained loose or in packages, or they may be blended at home. They should include whole cloves, peppercorns, stick cinnamon, mace, tiny red peppers, mustard seed, allspice, bay leaves and root ginger. Spices are usually tied in a square of cheesecloth and cooked with the pickles. Many housewives prefer to use Glass Top instead of Metal Top Jars for pickles or other products that have a strong acid, vinegar or salt solution.

More satisfactory results can be obtained if the housewife understands what causes some of the troubles sometimes encountered in pickling.

1. Tough, shriveled pickles are the result of too much salt or sugar, or too strong a vinegar.
2. Soft pickles are the result of too strong a vinegar or being put in too weak a brine.
3. Hollow pickles are due to imperfect cucumbers or else too great a lapse of time between picking and pickling.
4. Slippery pickles are the result of letting the cucumbers stand above the brine. This will also cause them to be soft.
5. Off color is the result of using the wrong kind of vinegar or cooking in a copper kettle.
6. Vinegar—Use high grade cider or pure grain vinegar.
7. Avoid water having excess of minerals.
BRINING CUCUMBERS

Some housewives during the busy season prefer to brine their cucumbers and make pickles in a less busy season.

Perfect brining or curing requires from six to eight weeks. Brine for pickles is made by adding one pint of salt to nine pints of water (soft preferred). This is a 10% solution and should barely float a new laid egg. Common fine salt (not prepared table salt) or clean coarse salt should be used. Do not wash cucumbers unless necessary; if washed, drain. Put cucumbers in brine using round board or plate with weight to keep cucumbers below surface. On the following day place scant pint of salt on cover. At the end of each succeeding week for five weeks add one-half cup salt, placed on cover. Skim off scum as it forms.

Before making pickles the cucumbers must be freshened by soaking in from three to five changes of fresh water as most of the salt must be removed. The cucumbers are now ready for pickling as specified in the individual recipes, but omit the brining and salting which is specified in the recipes when using cucumbers prepared as above.

SWEET PICKLES

- Sweet Apple Pickles
  2 quarts vinegar.
  3 quarts light brown sugar.
  1/4 ounce of cinnamon bark.
  1 tablespoon of whole cloves.
  1 peck of ripe sweet apples.

  Put vinegar, sugar, and bag containing spices in a kettle and bring to a boil, skim, and then drop in the apples, which have been peeled and cut into quarters or halves. Let the apples cook until they begin to look transparent. Lift them out with a flat spoon, put into hot BALL Jars, fill jars to overflowing with the hot syrup and seal. If there is too much syrup it may be used for a few more apples, or it may be boiled down before pouring over the fruit.

- Apple Chutney
  2 quarts apples.
  1 quart brown sugar.
  2 quarts cider vinegar.
  2 pounds seeded raisins.
  1 small onion.

  Wash, peel, and core the apples. Cook them with the brown sugar and vinegar until they are smooth. When the mixture is thick, place it in a crock and add the raisins chopped fine, the onion, an ounce each of white and black mustard seed, two ounces of ground ginger, one tablespoon of salt, and two or three red peppers chopped fine. Mix the ingredients thoroughly, heat them, and let them stand over night. In the morning place the chutney in BALL Jars and seal them. Apple Chutney may be used as a catsup.

- Spiced Apples
  2 quarts water.
  10 cups sugar.
  2 oranges.
  2 pounds seeded raisins.
  2 teaspoons cinnamon.
  11/2 teaspoons ground cloves.
  3 quarts chopped apples.

  Wash, peel, quarter and core apples and chop them fine. Make a syrup by boiling together for 15 minutes 2 quarts water and 10 cups sugar. Add rind and pulp of 2 oranges, 2 pounds seeded raisins, chopped fine, 2 teaspoons cinnamon and 11/2 teaspoons ground cloves. While this mixture is boiling add 3 quarts chopped apples. Boil for 15 minutes and pack boiling hot, into clean, hot BALL Jars and seal immediately.

Clean vegetables thoroughly
• Pickled Barberries

Soak nice, large bunches of barberries in salt and water for 3 hours. Remove from the water and pour scalding vinegar over them. Splice them if preferred. Place in BALL Jars and cover with hot vinegar. These will keep their color and are handsome for garnish.

• Pickled Beets

Cook small beets until tender. Cold-dip and slip skins. Make a pickling syrup of 2 cups sugar, 2 cups water, 2 cups vinegar, 1 lemon, sliced thin, 1 tablespoon cinnamon, 1 teaspoon cloves and 1 teaspoon allspice. Cover beets with mixture and simmer for 15 minutes. Seal in clean, hot BALL Jars.

Golden wax beans, stems of Swiss chard or small carrots may be pickled in the same way.

• Spiced Blueberries

5 pounds blueberries.
6 cups sugar.
2 cups weak vinegar.
1 tablespoon cinnamon.
1 tablespoon cloves.
1 tablespoon allspice.

Tie spices in cheesecloth. Boil vinegar solution in the following proportions:
4 cups sugar.
1 cup vinegar.
1 tablespoon allspice.

Boil rapidly in this syrup for 10 minutes. Let stand overnight. Drain off syrup, boil for 10 minutes. Seal in hot, clean BALL Jars.

If cooked too long the berries will have a shriveled appearance.

• Cantaloupe Pickles

Select under-ripe cantaloupe. Cut into sections and remove rind. Soak for 3 hours in salt solution (4 tablespoons salt to 1 quart water). Drain off brine and add the well-drained rind to a pickling syrup made from the following ingredients:
4 cups water.
4 cups sugar.
1 cup vinegar.
1 tablespoon cinnamon.
1 tablespoon allspice.
1 tablespoon cloves.

Tie spices in cheesecloth. Boil sugar, spices and vinegar together for 10 minutes. Add berries which have been washed and well drained and simmer for 10 minutes. Seal in hot, clean BALL Jars.

Good Ingredients call for care in preparation

Good Ingredients call for care in preparation

Pickled Crab-Apples

Choose firm crab-apples of uniform size. Do not pare but remove blossom ends. Make a spiced syrup in the following proportions:
1 quart vinegar.
4 cups sugar.
1 tablespoon cinnamon.
1 tablespoon cloves.
1 tablespoon allspice.
1 tablespoon mace.

Spices may be tied in a bag. Cook syrup until it coats a spoon, add the apples and heat them slowly to avoid bursting. Simmer them until tender. Pack into clean, hot BALL Jars, cover with syrup and seal at once.

• Cucumber Sweet Pickles (Ripe)

8 large ripe cucumbers.
¾ pound stick cinnamon.
1 ounce whole cloves.
6 cups sugar.
1½ pints vinegar.

Pare cucumbers, quarter, and remove seeds, and cut the quarters into medium-sized pieces. Boil for 1 minute in salted water (2 tablespoons salt to 1 quart water), drain and simmer in clear water until tender but firm. Drain well. Tie spices in a bag and boil them with the vinegar and sugar for 5 minutes. Pour mixture over the cucumbers. Cover jar and let stand overnight. Drain off syrup, boil for 10 minutes and pour over the cucumbers again. Flavor is improved if this process is repeated several times. Pack the pickles into clean, hot BALL Jars and seal.

• Spiced Currants

6 cups sugar.
2 cups vinegar.
3 quarts currants.
1 pound seeded raisins.

Make a syrup of 6 cups sugar and 2 cups vinegar. Add 3 quarts currants and 1 pound seeded raisins, chopped fine. Boil mixture 30 minutes, add salt and cloves, allspice and nutmeg. Pour the spiced currants into hot, clean BALL Jars and seal at once.

If BALL Jelly Glasses are used, cover them with melted paraffin.

• Pickled Figs

Select young and even-sized carrots, boil until tender and pack into clean, hot BALL Jars. Fill the jars with hot pickling syrup made by boiling together for 5 minutes 2 cups vinegar, 1 cup sugar and 2 tablespoons mixed spices. Seal jars at once.

Good Ingredients call for care in preparation

• Cherry Relish

Remove pits from cherries. Drain cherries and cover with vinegar solution made in proportion of ¾ cup vinegar to 1 quart water. Let stand for 6 hours, drain cherries, measure them and add an equal measure of sugar. Let cherries stand overnight. Seal in clean, hot BALL Jars.

The vinegar solution, which has been drained off, may be used in making various kinds of sweet pickles.

Good Ingredients call for care in preparation

Pickled Figs

Make a strong soda solution with boiling water and pour this over just enough figs to cover the bottom of a preserving kettle. Let them remain in this solution five minutes and then drain them thoroughly. Take one quart of vinegar to three pounds of sugar and when dissolved add the figs and cook slowly for one hour. Seal in BALL Jars. If you have some syrup left, more figs may be cooked in it.
A spice bag filled with whole cloves, cinnamon and allspice may be boiled with the vinegar syrup if desired. Some persons, instead of using a soda solution, prefer to soak in rather weak salt water for about six hours, rinse, and then boil as above.

**Gooseberry Relish**

1 quart gooseberries.
1 cup sugar.
2 tablespoons vinegar.
Allspice to suit taste.
Cinnamon to suit taste.
Cloves to suit taste.

Stem and wash the gooseberries, add sugar, and boil 20 minutes. Add 2 tablespoons vinegar and season with allspice, cinnamon, and cloves to suit the taste. Pack while hot, into clean, hot BALL Jars and seal at once.

**Gooseberry Chutney**

1 quart of nearly ripe gooseberries.
⅔ pound raisins.
3 small onions.
1 cup brown sugar.
2 tablespoons mustard (mix this in a little vinegar).
2 tablespoons ginger.
1 tablespoon salt.
2 pints vinegar.
A little turmeric.

Chop the onion, cook all ingredients together until smooth and thick, and seal in hot BALL Jars.

**Pickled Grapes**

Select bunches of grapes of uniform size and ripeness. They should not be over-ripe. Wash, and without removing the grapes from stems, pack the bunches closely into clean BALL Jars, being careful not to crush the fruit. Make a syrup in the proportion of 1⅔ cups white sugar to 1 cup white vinegar and boil for 5 minutes. Fill jar with hot syrup and seal.

Purple, white, and red grapes may be pickled in this way. They keep their shape and color and are excellent to serve as a relish or garnish.

**Grape Ketchup**

4 pounds grapes.
1 pound tart apples.
4 cups white sugar.
1⅓ cups vinegar.
½ teaspoon salt.
2 tablespoons cinnamon.
2 teaspoons allspice.
2 teaspoons cloves.

Wash grapes and remove from stems. Place in a pan, do not add any water, steam them until soft. Cook apples until tender. Press the fruit through a sieve, add remaining ingredients and simmer the mixture for 20 minutes. Seal in clean, hot BALL Jars.

The spices should be whole and tied in a cheesecloth while cooking and be removed before the ketchup is sealed. Ground spices may be used but they give the product a darker color.

**Spiced Grapes**

- 7 pounds grapes.
- 8 cups sugar.
- 2 cups vinegar.
- 1 nutmeg, grated.
- ½ tablespoon ground cinnamon.
- 1 teaspoon ground cloves.

Wash, and slip skins from grapes. Place in preserving kettle and simmer until soft. Press pulp through a fine sieve to remove seeds. Add to pulp the grape skins, sugar, vinegar, nutmeg, cinnamon and cloves. Simmer mixture for 1 hour. Pack while hot into clean, hot BALL Jars and seal immediately.

**Pickled Peaches**

Make a syrup of two quarts of best cider vinegar and 3 quarts granulated sugar. Place this in a kettle with a spice bag containing one tablespoon of whole cloves and one-quarter pound of stick cinnamon. Pare and halve the peaches, leaving an occasional stone for flavor. Cook the peaches in the syrup until tender, then place in BALL Jars. Fill jars with the vinegar syrup, and seal. The peaches may be left whole if preferred.

**Peach Chutney**

- 4 quarts peaches.
- 5 cups vinegar.
- ½ cup chopped onion.
- ⅓ cup sugar.
- ¼ pound raisins.
- ¼ pound white mustard seed.
- 2 ounces scraped ginger root.
- 1 ounce red peppers.
- 1 ounce garlic.

Peel peaches and remove stones. Add 2 cups vinegar to each 4 quarts peaches and cook until soft. Add another cup of vinegar, ½ cup chopped onion, ⅓ cup sugar, ¼ pound raisins, ¼ pound white mustard seed, 2 ounces scraped ginger root, 1 ounce red peppers and 1 ounce garlic. Mix ingredients well and add 2 cups vinegar. Boil mixture 15 minutes. Pack into clean, hot BALL Jars and seal at once.

Peach chutney may be used as ketchup.

**Pimiento Sweet Pickles**

24 bright-red sweet peppers.
1 tablespoon whole cloves.
1 blade mace.
3 inches stick cinnamon.
1 tablespoon allspice.
1 small piece root ginger.
1 tablespoon whole mustard seed.
4 cups vinegar.
7 cups granulated sugar.

Wash peppers, remove seeds and white connecting fibre and allow them to soak overnight in cold brine made in proportion 1 tablespoon salt to 1 quart water. Drain and chop peppers. Heat together the spices, tied in cheesecloth, the vinegar, and sugar. Add the peppers, simmer ½ hour and strain. Pack peppers into clean, hot BALL Jars. Boil down the pickle syrup until thick and pour over peppers until jar is filled. Seal immediately.

This pickle forms a delightful addition to plain salads, salad dressings and jellied meats or chicken.
• Pickled Pears

These may be made the same as Sweet Apple Pickles.

• Ginger Pears

12 pears.
8 cups granulated sugar.
4 lemons—juice.
2 lemons—grated yellow rind.
2 ounces preserved ginger (cut fine).
4 cups water.

Wash, peel and cut pears into small pieces. Mix remaining ingredients together and bring to boil. Add pears and boil slowly until mixture is thick. Pack into hot, clean BALL Jars and seal immediately.

• Spiced Plums

4 quarts plums.
2 cups vinegar.
6 cups sugar.
1 tablespoon cloves.
1 tablespoon cinnamon.
1 teaspoon allspice.

Wash and dry plums. Place them in a stone jar or bowl. Boil vinegar, sugar and spices together for 10 minutes and pour over plums. Cover and let stand overnight. Drain off the liquid and cook until plums are clear but not broken. Pack in clean, hot BALL Jars, fill with pickling syrup and seal immediately. The plums should retain their color and should be firm and plump in appearance.

• Spiced Green Tomatoes

5 pounds small, green tomatoes or larger tomatoes sliced medium thick.
6 cups white sugar.
2 cups vinegar.
1 tablespoon stick cinnamon.
1 teaspoon whole cloves.
1 teaspoon whole allspice.
1 tablespoon white mustard seed.

Wash tomatoes but do not peel. If small tomatoes are used prick them slightly. Combine sugar, vinegar and spices; bring mixture to the boiling point and pour it over the tomatoes. Let stand for 6 hours, or overnight. Drain off liquid and cook until it coats a spoon. Add tomatoes and cook until clear. Seal in clean, hot BALL Jars.

Green plum, pear or peach tomatoes are good for this pickle, but large green tomatoes may be sliced and used.

• Pickled Watermelon Rind

Soak 2 pounds watermelon rind overnight in salt-water (3 tablespoons salt to 1 quart water). Drain off brine and cook watermelon rind in clear water until tender. Make a syrup of 2 cups sugar, 2 cups water, 2 cups vinegar, 1 lemon, sliced thin, 1 tablespoon cinnamon, 1 teaspoon cloves and 1 teaspoon allspice. Add rind to the hot solution and boil rapidly until rind is clear. Pack into clean, hot BALL Jars and seal immediately.

• Pickled Walnuts

Pick young walnuts while they are soft enough to be pierced with a needle. Soak them in a strong brine for three days, drain them, soak them in cold water for six hours, drain them and place them in a stone crock. To a gallon of vinegar add a cupful of sugar, two tablespoonfuls each of whole peppers and cloves, a tablespoon of allspice, and eight blades of mace; boil the mixture for ten minutes, pour it over the walnuts while it is scalding hot, and let them stand for three days. Then drain off the vinegar, put the nuts into BALL Jars, bring the vinegar to a boil, pour it over the nuts, seal the jars, and store them in a cool place. The nuts must stand at least six weeks before they are ready for use.

• Beet Relish

1 quart beets, diced.
1 medium-sized white onion.
2 red peppers.
2 teaspoons salt.
½ cup grated horseradish.
2 cups vinegar.
½ cup sugar.

Cook beets until tender, cold-dip and slip skins. Cut or chop beets, onions and peppers. Combine ingredients and cook mixture until it is clear. Seal in clean, hot BALL Jars.

• Cabbage Relish

1 quart chopped cabbage.
1 quart chopped green tomatoes.
1 cup chopped red pepper.
1 cup chopped green pepper.
1 cup chopped white onions.
1 cup sugar.
4 cups vinegar.
5 tablespoons white mustard seed.
1 tablespoon celery seed.
½ teaspoon turmeric.
Salt.

Soak cabbage and tomatoes separately overnight in salt water (4 tablespoons salt to 1 quart water). Drain off brine and add the other ingredients. Let stand for 2 hours. Simmer the mixture until it is clear and seal in clean, hot BALL Jars.

• Carrot Ketchup

1 quart carrots, ground.
1 cup celery, chopped fine.
1 large red pepper or 1 green pepper chopped fine.
1 medium-sized white onion, chopped fine.
2 cups vinegar.
½ cup sugar.
2 teaspoons salt.
½ teaspoon paprika.

Cook carrots until tender. Chop celery, pepper and onion very fine. Combine ingredients and cook mixture until it is clear. Seal immediately in clean, hot BALL Jars.

Eat more canned green vegetables
Cauliflower-Cucumber Mustard Pickles

2 cauliflowers.
2 quarts green tomatoes.
6 green peppers.
1 quart very small onions.
24 small cucumbers.
3 1/2 quarts vinegar.
1 cup sugar.
1/4 pound mustard.
1/4 ounce turmeric.
1/4 cup flour.

Break cauliflower into small pieces, chop tomatoes and green peppers and add the onions and cucumbers without cutting. Cover with brine (using 1 cup salt to 1 quart water) and let stand overnight. Scald mixture and drain thoroughly. Heat vinegar with the sugar and add mustard, turmeric and flour which have been blended to a smooth paste with a little vinegar. Cook for 20 minutes, stirring constantly, add prepared vegetables and when cool place in clean BALL Jars and seal immediately.

The amount of mustard may be increased or decreased, to suit taste.

Celery Relish (1)

1 quart celery, chopped.
1 cup white onion, chopped.
2 large red peppers.
2 large green peppers.
1 teaspoon salt.
2 cups vinegar.
1/2 cup sugar.
1 teaspoon mustard.

Large, coarse stalks of celery may be used for celery relish. Chop the celery and onion. Cook them separately in salted water (2 teaspoons salt to each quart water) until tender. Drain them and add chopped peppers from which the seeds have been removed. Add other ingredients and cook the mixture until tender. Seal immediately in clean, hot BALL Jars.

Celery Relish (2)

2 quarts celery, chopped.
2 quarts cabbage, chopped.
1 cup onion, chopped.
1/2 cup salt.
4 cups vinegar.
2 tablespoons white mustard seed.
2 teaspoons celery seed.
1 teaspoon clove extract or 12 whole cloves.
1/2 teaspoon red pepper.
1 cup sugar.
8 bay leaves.

Mix vegetables together, add salt and let stand 20 minutes. Add spices, add sugar to vinegar and boil 5 minutes. Drain vegetables and add to hot vinegar. Pack into clean, hot BALL Jars and seal immediately.

Cherry Olives

Fill a clean BALL Jar with large sweet cherries, leaving stems and pack fruit as closely as possible. Mix together 1 tablespoon salt and 1 cup cold vinegar for each quart and pour mixture into the jar of cherries. Fill the jar with cold water. Seal as usual. Allow cherries to stand for at least 2 weeks before using. These cherries are not heated, and make a firm salt pickle to be used with meats.

Chili Sauce

4 quarts chopped and peeled tomatoes.
2 cups chopped onions.
1 cup chopped sweet red pepper.
1 cup chopped green pepper.
1 small hot, red pepper.
3 tablespoons salt.
1/2 cup sugar.
1 tablespoon white mustard seed.
1 teaspoon cinnamon.
1 teaspoon allspice.
1/2 cups vinegar.

Combine the vegetables, salt and sugar, and cook until the mixture begins to thicken, then add the vinegar and spices, and cook until the mixture becomes a thick sauce. Pour into hot BALL Jars and seal immediately.

Chow-Chow

2 quarts green tomatoes.
12 small cucumbers.
4 green peppers.
1 small head cabbage.
6 onions.
1 quart string beans.
1 quart vinegar.
1 tablespoon celery seed.
1 tablespoon mustard.
1 tablespoon allspice.
1 tablespoon pepper.
1 tablespoon cloves.

Chop together tomatoes, cucumbers, peppers, cabbage, onions and string beans. Let the mixture stand in a covered enamel pan overnight. Place mixture in a pan with alternate layers of salt, using 1 cup salt, preserving enough salt for top layer. Let mixture stand 12 hours then drain. To 1 gallon vinegar add 1 tablespoon each of celery seed, mustard, allspice, pepper and cloves; heat to boiling point, add vegetables and cook mixture until tender. Pack the chow-chow into clean, hot BALL Jars and seal at once.

Chutney

24 ripe tomatoes, medium size.
6 onions, medium size.
3 red peppers. 3 green peppers.
12 tart apples.
1 pound seedless raisins.
1 cup celery, cut fine.
2 quarts vinegar.
3 cups sugar. Salt.

Chop vegetables first and then the apples. Cut celery. Combine ingredients and cook chutney until it is thick and clear. Pour immediately into clean, hot BALL Jars, and seal immediately.

Cucumber Pickles

Scrub two hundred cucumbers, put them into stone jar or bowl, cover with scalding hot brine (proportion 9 pints water to 1 pint salt). Let the...
cucumbers stand overnight in the brine. In the morning rinse and drain them. Wash BALL Jars and place in the bottom of each a slice of red pepper, slice of green pepper, and a little horseradish washed, scraped and cut into pieces. Pack the Jars full with the cucumbers and on top of each scatter a few cloves, white mustard seed and black mustard seed. Add one-half pint of brown sugar to one gallon of the best cider vinegar and bring to boiling point. Fill Jars to overflowing with the boiling vinegar and seal at once. Sugar may be omitted if a very sour pickle is preferred.

- Sour Cucumber Pickles

If using brined cucumbers (page 44) soak to remove most of the salt. Drain well and place in porcelain lined kettle with enough pure vinegar to cover cucumbers. Bring to the boiling point, drain off vinegar and pack cucumbers into hot BALL Jars. Add, if desired, spices and three tablespoons sugar to each Jar. Cover to overflowing with fresh cold vinegar.

- Sweet Cucumber Pickles

If using brined cucumbers (page 44) soak to remove most of the salt. Place cucumbers in porcelain lined kettle, cover with pure vinegar and bring to boiling point. Drain off vinegar and pack cucumbers into hot BALL Jars and cover the cucumbers to overflowing with syrup made of one gallon pure vinegar, ¼ cup whole mixed pickle spices. (Tie spices in a cheesecloth bag). Boil the spices in the vinegar for five minutes, discard the spices and add 8 cups granulated sugar. As soon as the sugar is dissolved pour hot syrup over cucumbers and seal immediately.

- Cucumber Oil Pickles

200 cucumbers.
6 small onions.
¼ cup celery seed.
½ cup black pepper.
½ cup mustard seed.
8 cups sugar.
8 cups cider vinegar.
1 cup olive oil.

Wash cucumbers and slice thin. Slice onions. Soak overnight in brine strong enough to float an egg, made of eight quarts water to one quart salt. Drain but do not wash. Boil vinegar, sugar and spices together, pour over cucumbers. Add olive oil and cook near boiling point until pickles change color. Fill hot BALL Jars to overflowing and seal immediately. If not enough liquid add more vinegar.

- Cucumber Mustard Pickles

(Semf-Gurken)

8 large ripe cucumbers.
4 cups vinegar.
2 cups sugar.
2 tablespoons mustard seed.
1 tablespoon mixed whole spice.

Peel cucumbers, remove seeds and cut into long strips. Salt lightly and let stand 24 hours. Drain well. Mix vinegar, sugar, mustard seed and spice and pour over the cucumbers. Cook until soft. Pack into clean, hot BALL Jars and seal at once.

- Cucumber Ketchup

1 quart ripe cucumbers, large.
1 cup white onions.
2 green peppers, medium-sized.
2 cups vinegar.
1 cup sugar.
2 tablespoons white mustard seed.

Cayenne pepper. Salt.

Pare cucumbers, cut into quarters and remove seeds. Chop cucumbers, onions and peppers or put through a food chopper. Add a small amount of water to prevent sticking and boil mixture until cucumbers are tender. Add sugar and seasoning to vinegar, and heat. Add mixture and cook until it is thick and clear. Seal immediately in clean, hot BALL Jars.

- Ripe Cucumber Rings

SELECT large yellow cucumbers. Pare them and cut into slices ½ inch thick. Soak overnight in salt-water (¼ cup salt to 1 quart water). Drain and cook in clear water for 20 minutes. Drain again and cover with a pickling syrup. (See recipe). Cook until clear and seal immediately in hot, clean BALL Jars.

- Spiced Cucumbers

12 ripe cucumbers.
1 ½ cups sugar.
2 cups vinegar.
1 teaspoon salt.
1 tablespoon cloves, whole.
1 tablespoon allspice, whole.
2 tablespoons cinnamon bark.
1 tablespoon white mustard seed.

Cut cucumbers into slices 1 inch thick or in lengthwise strips. Place in a bowl and sprinkle with ½ cup salt. Let stand overnight. Drain and wash in cold water. Mix the sugar, vinegar and spices and boil for 5 minutes. Add cucumbers and cook mixture slowly until tender. When done the cucumbers should be clear in appearance, and the liquid should be the consistency of a medium thick syrup. Pack into clean, hot BALL Jars and seal immediately.

- Emergency Pickles

1 pint carrots, cooked and cut into strips.
1 green pepper.
1 red pepper or 2 pimientos, chopped.
3 medium-sized onions, sliced.
1 cup cooked string beans.
⅛ cup sugar.
1 cup vinegar.
⅛ teaspoon paprika.
1 ½ teaspoon salt.
¼ teaspoon turmeric.

Combine ingredients and cook slowly until mixture is clear. Seal in clean, hot BALL Jars.

- Horseradish

CAREFULLY scrape horseradish roots and cover them with cold water to prevent discoloration. Drain roots and grind in food chopper. Fill clean pint BALL Jars ⅔ full with ground horseradish. Add 1 teaspoon salt and fill jar with white vinegar, and seal. Cider vinegar makes product dark in color.
Pickling

• Winter Dill Pickles

Make a brine by adding half a cup of salt to each four quarts of water; in this soak a hundred medium-sized cucumbers overnight. In the morning drain and wipe dry and pack tightly in layers in BALL Jars between cherry leaves and dill. Add small piece of red pepper and a piece of alum the size of a bean to each Jar. Fill the Jars with cold brine made as follows—Boil together ten quarts water, one quart vinegar and two cups of salt. Let this brine stand overnight. A cup of mustard seed and cup of horseradish shaved fine may be added to the brine.

• Mixed Pickles

1 quart small cucumbers.
1 pint pickling onions.
1 pint small carrots, or large carrots, quartered.
2 red peppers, seeds removed.
1 pint celery, cut in 2-inch lengths.
4 tablespoons white mustard seed.
1 cup sugar.
4 cups cider vinegar.
4 tablespoons salt.

Soak onions and cucumbers separately for 24 hours, in a brine made in the proportion of 1 cup salt to 1 gallon water. Remove from brine, soak in cold water for 2 hours and drain. Add spices, sugar and vinegar and let stand overnight in a covered vessel. Drain off vinegar, heat it, add vegetables and allow mixture to simmer for 15 minutes. Seal immediately in clean, hot BALL Jars.

• Mixed Mustard Pickles

1 pint small cucumbers.
1 pint large cucumbers, sliced.
1 pint pickling onions.
1 cup string beans, cut diagonally in 1-inch pieces.
1 pint cauliflower, cut into small pieces.
3 red peppers, chopped.
3 green peppers, chopped.
1 cup small carrots, or sliced carrots.
1 pint small, green tomatoes, cut in halves or quarters.

Select cucumbers not longer than 2 inches. Soak all the vegetables in brine (1 cup salt to 1 gallon water) overnight. Drain and soak them in clear water 3 hours. Cover the vegetables with vinegar and water, using for the mixture equal amounts of vinegar and water. Let stand for 1 hour and then heat to simmering point. Make a dressing of the following ingredients:

- ¼ cup white sugar.
- 4 tablespoons flour.
- 4 tablespoons powdered mustard.
- ½ tablespoon turmeric.
- 1 teaspoon celery salt.
- 6 cups vinegar.

Mix dry ingredients and add hot vinegar slowly, stirring to make a smooth paste. Cook mixture in a double boiler until the sauce thickens. Drain vegetables. Pour mustard dressing over them while they are hot, and simmer for 5 minutes. Pack pickles into hot, clean BALL Jars, and seal immediately.

• Mincemeat

2 pounds lean beef.
1 pound chopped suet.
4 pounds tart apples.
6 cups sugar.
3 pounds currants.
2 pounds raisins.
1 nutmeg.
½ teaspoon ground mace.
2 oranges.
2 lemons.
1 pound citron.
1 tablespoon salt.

Stew beef in as little water as possible until quite tender; cool and chop into fine pieces. Add beef suet, chopped fine, and apples pared, cored and chopped, sugar, currants, raisins, spices, orange and lemon juice, grated rind of the oranges and of 1 lemon, chopped citron and salt. Mix thoroughly and cook 1 hour. Pack in clean BALL Jars. Seal jars and store in a cool place.

• Mock Mincemeat

3 pounds green tomatoes.
3 pounds apples, chopped.
2 pounds raisins, chopped.
8 cups brown sugar.
2 tablespoons salt.
1 cup suet. 1 cup vinegar.
2 tablespoons cinnamon.
2 teaspoons cloves. 1 nutmeg.
Orange peel, if desired.

Chop the tomatoes and drain. Measure juice and add equal amount of water to pulp. Scald mixture and drain off the liquid. Repeat twice this process of adding fresh water, scalding and draining. To the mixture add chopped apples, sugar, raisins, salt, and suet, and cook until clear. Add remaining ingredients and cook mixture until thick. Pack immediately into clean, hot BALL Jars and seal at once.

• Pickled Nasturtiums

Pick the green seeds (after the flower has dropped off) with stems about one and one-half inches long, lay them in moderately salted cold water for forty-eight hours. Then lay them in fresh cold water twenty-four hours, drain, pack in BALL Jars and cover with boiling vinegar. Seal and stand away at least four weeks before you use them. These may be used as a substitute for capers.

• Pickled Onions

Pour boiling brine strong enough to hold up an egg over the small button onions, let them stand twenty-four hours, then drain, and cover with hot vinegar spiced to taste.

• Pepper Relish

12 red peppers.
12 green peppers.
12 onions.
2 cups vinegar. 2 cups sugar.
3 tablespoons salt.

Chop peppers and onions. Cover with boiling water and let stand for 5 minutes, and drain. Add vinegar, sugar and salt and boil mixture 5 minutes. Pour into clean, hot BALL Jars and seal immediately.

Ball Jars help you reduce the cost of living
• Pepper Mangoes
1 doz. red peppers.
1 doz. green peppers.
2 heads cabbage.
1 teaspoon ground cloves.
1 teaspoon ground allspice.
4 tablespoons mustard seed.
2 tablespoons salt.

Cut the tops from one dozen red and one dozen green peppers. Remove the seeds and save the tops. Stand the peppers upright in a pan, put a teaspoon salt in each one, cover with cold water, and soak 24 hours. Drain.

Cut two large heads of cabbage on a cabbage cutter, add to this one teaspoon ground cloves, one teaspoon ground allspice, four tablespoons whole mustard and two tablespoons salt; mix thoroughly. Stuff the peppers with this mixture. Put on the tops and tie tightly. Stand them upright in hot BALL Jars, and cover with cold vinegar. Put half red and half green peppers in each jar.

• Piccalilli
1 peck green tomatoes.
1 head cabbage.
3 peppers, red or green.
8 large onions.
1 cup salt.

Chop and mix together tomatoes, cabbage, onions and peppers. Add salt and let stand overnight. Drain and add the following ingredients:
2 quarts vinegar.
2 cups brown sugar.
1/2 pound mustard seed.
2 tablespoons cinnamon.
2 tablespoons ground black pepper.
1 tablespoon allspice.
1 tablespoon cloves.
2 tablespoons ginger.
1/4 teaspoon cayenne pepper.

Place the cloves, allspice and ginger in a bag. Boil the mixture for 30 minutes, stir frequently, and pour into clean, hot BALL Jars. Seal immediately.

• Green Tomato Pickles
1 peck of green tomatoes, sliced.
1 1/2 ounces of black pepper.
1 ounce of whole allspice.
1/4 pound ground mustard.
1 dozen onions, sliced.
1 ounce of whole cloves.
1 ounce of mustard seed.

Put a layer of tomatoes, then a layer of onions, then a sprinkling of salt, then another layer of tomatoes, and so on; let stand overnight.

Next morning, drain off all the liquor, put them in a porcelain-lined kettle with all the other ingredients, cover with vinegar, and SIMMER gently fifteen minutes. Pack in BALL Jars.

• Tomato Ketchup
1/2 peck tomatoes.
3 red peppers.
2 medium-sized onions, cut fine.
2 tablespoons salt.
1/4 cup sugar.
2 cups vinegar.
2 teaspoons celery salt.
2 teaspoons ground mustard.
1 tablespoon whole allspice.
1 tablespoon cloves.
1 tablespoon cinnamon.
1 teaspoon paprika.

Cook tomatoes, peppers and onions together without adding water. Press mixture through strainer, and measure pulp. To pulp (4 quarts) add the salt, sugar and spices. Place whole spices in a bag during the cooking and remove bag before pouring the ketchup into jars. Ground spices, except paprika, will darken ketchup. Long, slow cooking also gives a dark color. Cook ingredients together, except vinegar, rapidly for 1 hour, add vinegar and cook mixture until it is thick. Seal in clean, hot BALL Jars. It should be bright-red in color.

• Cider Vinegar
SELECT ripe, sound apples, wash thoroughly and extract juice in a clean cider-press. Place juice in a large receptacle and allow to stand for a few days. Then drain, leaving sediment in bottom undisturbed. Wash out barrels or kegs in which it is to be placed as thoroughly as possible with boiling water. Fill them 3/4 full with the juice. Leave bung out but place in a loose plug of cotton to prevent dirt from falling in. For each five gallons in barrel add one cake compressed yeast dissolved in lukewarm water. Keep barrels at a temperature of from 75 to 85° F. if possible. As soon as the alcoholic fermentation ceases (which will take several months), drain out clear liquid, rinse barrels and put the clear liquid back again, filling the barrels 3/4 full. Add from 2 to 4 quarts vinegar containing more or less "mother" for each 5 gallons liquid. Store barrels in as warm a place as possible until vinegar is made; this usually requires from 6 to 12 months. Then fill barrels full and bung them tight.

• Honey Vinegar
Mix together 1 quart of strained honey and 8 quarts warm water. Allow mixture to stand in a warm place until fermentation ceases. Seal in clean BALL Jars. The resulting vinegar is white and of excellent quality.

• Spiced Vinegar
1 quart vinegar.
2 cups sugar.
1 tablespoon cinnamon.
1 teaspoon allspice.
1 tablespoon white mustard seed.
1 teaspoon cloves.
1 teaspoon salt.

Mix ingredients, bring to boil and pour over pickles.
The Famous "Ball" Line of Fruit Jars, Fruit Jar Caps, Glass Lids, Jelly Glasses and Rubbers

For fifty years housewives the world over have depended very largely on BALL Fruit Jars and their accessories to preserve foods. As a result, from a very limited production at first, at the present time more than three-fourths of all fruit jars sold are branded "Ball." The principal reason for such wide-spread preference is the distinctive feature of all BALL Jars—an absolutely smooth and perfect shoulder for the rubber ring insuring positive air-tight seal. This feature, so essential to perfect food preservation, is due to the patented Owens Process of manufacture, exclusive right to which we own for the manufacture of fruit jars.

The Best Known and Most Popular Fruit Jars Produced

Ball "Owens Process" "Perfect Mason" and "Ideal" Fruit Jars, Caps and Jellies

The selection of the right jar for canning and preserving is of prime importance. Too often the quality of the jar has been taken for granted—just as too little attention has been given to the Rubbers and Caps.

Success in canning is a question of small details, and a perfect Jar is as essential to good results as the selection of ingredients and the method of procedure.

BALL Jars are the scientific development of many years devoted to experimenting and practice. The vast resources of the Ball Institution have been constantly devoted to the perfecting of the Jars that bear its name.

Ball "Perfect Mason" Fruit Jars

Made in Pint, Quart, and Half-Gallon Sizes

Ball "Perfect Mason"
Round or Square. With Glass Top Seal. For those who prefer an all glass Jar.

Square "Perfect Mason" Jars
Identical in every way with the standard Mason Jar except the body is square instead of round. Uses the same Caps and Rubbers as the Round Mason.

Square "Ideal" Jars
The same style Jar as the Round "Ideal" except the shape of the body. Uses the same wire fastenings, glass lids, and rubbers as the Round Ideal.

Ball "Perfect Seal" Red Rubbers
Packed with All Ball Jars

Ball Jars are easy to clean
Ball "Wide Mouth" Jars

Especially adapted for canning whole, large Fruits and Vegetables, large pieces of Meats and Chicken.

Permits contents to come out of Jar without tearing or breaking.

BALL "Special" Wide Mouth Mason Jars—Large Mouth—Opening as wide as any—wider than many—have the same reliable features as the regular Mason Jar. Fitted with Genuine Zinc P/L Caps and Rubbers.

BALL "Eclipse" Wide Mouth Jars—A Jar that will be a delight to use. Same style and fastening as the "Ideal" but with as large an opening as Special Wide Mouth Masons.

Ball "Perfect Seal" and "Reliable" Red Rubbers

MODERN methods of canning make the question of Rubbers of most vital importance. They must be firm and elastic. They must be free from spongy and porous places that will admit air. They must be of proper width, size and thickness.

Ball Red Rubbers embody all these features. They are guaranteed to be equal in quality to any Fruit Jar Rubber on the market.

Using Ball Jars promotes economy
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