## EXTENSION SERVICE



> Important fruit canning pointers

Equipment

Canning jars

Syrup solutions

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

Because of their high acidity, fruits may be processed safely in a boilingwater canner. Low-acid foods (most vegetables and all meats) must be processed using a pressure canner. Some fruits that are not high in acid content can be processed in a boiling-water canner if acid is added in the form of lemon juice, citric acid, or vinegar. Figs are one fruit that fall into this category.

Boiling-water canners are readily available on the market, but any large metal container may be used. It should be deep enough to allow water to cover rack and jars, plus an additional 2 to 4 inches. A wire or wooden rack and a tight-fitting lid are necessary. A rack with dividers is helpful since it prevents jars from touching one another and falling against the sides of the canner during processing. A pressure canner may be used, provided it is deep enough. If using as a boiling-water bath canner, the cover should not be fastened; the petcock should be left open so steam can escape and pressure does not build up in the canner. Instructions are also given for actual pressure canning.

- Check jars for cracks or chips. Use only canning or canning-freezing jars.
- Secure a fresh supply of lids at the start of the season. Screw bands can be reused as long as they are in good condition.

Adding syrup helps canned fruit to retain flavor, color, and shape. It does not prevent spoilage of these foods. The following guideline for preparing and using syrups includes "very light" syrup, which approximates the natural sugar content of many fruits.

## Packing glass jars

## Other sweeteners

General rules for boiling-water canner

| Syrup solutions for 9-pint and 4-quart loads: |  |  |  |
| :---: | :---: | :---: | :---: |
| Type | \% Sugar | Cups Water | Cups Sugar |
| very light | 10 | $61 / 2$ | $3 / 4$ |
| light | 20 | 53/4 | $11 / 2$ |
| medium | 30 | 51/4 | $21 / 4$ |
| heavy | 40 | 5 | $31 / 4$ |
| very heavy | 50 | 41/4 | $41 / 4$ |

Combine water and sugar. Bring to a boil and pour over raw fruits in jars. For hot packs, bring water and sugar to a boil, add fruit, reheat to boil, and fill into jars immediately.

Hot pack is superior to raw pack because floating and discoloration are minimized.

Hot Pack - Boil fruit in syrup or water for 2 to 5 minutes. Fruits with high juice content may be preheated without added liquid and then packed in the juice that cooks out.
Raw Pack - Pack raw fruit into jars. Cover with boiling water, juice, or syrup.

Light corn syrups or mild-flavored honey may be used to replace up to half the table sugar called for in syrups. If you prefer noncaloric or artificial sweeteners, it is best to add them just before serving. Splenda ${ }^{\circledR}$ is the only sugar substitute on the market that can be added to the liquid before canning. It may be necessary to experiment to find the preferred level of sweetness.

Fruits may be canned in commercial unsweetened apple juice, pineapple juice, or white grape juice. Juice also can be extracted from some of the fruit that is being canned. To extract juice, thoroughly crush ripe, sound fruit; heat to simmering over low heat. Strain through cheesecloth or a jelly bag.

1. Clean jars and rims in hot water and detergent before each use, making sure to rinse thoroughly. If processing less than 10 minutes, jars must be sterilized. (To sterilize, boil jars 14 minutes in water which covers jars by 1 inch [Rule: 10 minutes for conditions less than 1,000 feet altitude; add an additional minute for each 1,000 feet; 14 minutes accommodates W.Va. conditions up to 4,000 feet]; save hot water for processing filled jars.) Treat lids according to manufacturer's directions.
2. Prepare syrup if desired.
3. Prepare fruit. Place peeled, sliced, halved, or quartered fruit immediately in an antioxidant solution such as Fruit Fresh ${ }^{\circledR}$ to prevent discoloration, or in a solution made by mixing six 500-milligram vitamin C tablets, crushed, in 1 gallon of water. Drain before packing.
4. Fill clean jars using hot- or raw-pack method. Pack fruit closely without crushing. Add hot water, juice, or syrup, leaving $1 / 2$-inch headspace. Canned fruit may float if packed loosely, if syrup is too heavy, or if some air remains.
5. Remove air bubbles by sliding a plastic utensil around and through fruit. If necessary, add more syrup, water, or juice.
6. Wipe jar rim clean. Adjust lids. Tighten screw bands securely but not too tight.
7. Place filled jars on rack in canner filled with boiling water. Jars should not touch each other so the hot water circulates around the jars.
8. Jars should be covered with 2 inches of water. Cover canner with lid.
9. When water comes to a rolling boil, start to count the processing time.
10. Boil gently for the recommended time.
11. When the processing time is up, remove jars immediately. Cool on rack or towel away from drafts. DO NOT RETIGHTEN BANDS.
12. The day after canning, check the seal by pressing in the center of the lid. It will be slightly concave and not move. Remove screw bands from cooled jars. Label with contents and date.

Maintaining
color and flavor
To ensure that your canned foods retain optimum colors and flavors during processing and storage:

- use only freshly picked, high-quality foods at the proper maturity and free of diseases and bruises.
- presoak fruit in an antioxidant solution before canning.
- use the hot-pack method.
- store the jars in a relatively cool, dark place, preferably between 50 and 70 degrees F .
- can no more food than you will use in one year.


## Syrup solutions for 9-pint and 4-quart loads:

| Fruit | Pack | Preparation | Canner Type - Process Time |
| :---: | :---: | :---: | :---: |
| Apples | Hot | About 19 pounds is needed to make 7 quarts. Wash, pare, core; cut into pieces. Place cut fruit in antioxidant solution. Drain; then boil 5 minutes in water, juice, or syrup, stirring to prevent burning. One pint of solution is needed for 5 pounds of apples. Pack hot into jars. Add liquid leaving $1 / 2$-inch headspace. | Process in boiling-water bath Pints or quarts 30 minutes <br> Process in a pressure canner Dial gauge - 7 pounds Weighted gauge - 10 pounds Pints or quarts 8 minutes |
| Applesauce | Hot | About 21 pounds of apples is needed for 7 quarts. Prepare applesauce - place apple slices in water and boil quickly until tender, 5-20 minutes, stirring occasionally to prevent burning. If sugar is added, preheat sauce to boiling, stirring constantly. Pack hot applesauce leaving $1 / 2$-inch headspace. | Process in boiling-water bath Pints 20 minutes Quarts 30 minutes <br> Process in a pressure canner Dial gauge -7 pounds Weighted gauge - 10 pounds Pints 8 minutes Quarts 10 minutes |
| Berries <br> (except srawberries) | Hot | About 12 pounds is needed for 7 quarts. Wash berries; drain; cap and stem if necessary. Heat berries in boiling water for 30 seconds; drain. Fill jars and add hot water, juice, or syrup to $1 / 2$-inch headspace. | Process in boiling-water bath Pints or quarts 20 minutes <br> Process in a pressure canner <br> Dial gauge - 7 pounds <br> Weighted gauge -10 pounds Pints or quarts 8 minutes |
| Berries <br> (except srawberries) | Raw | Wash berries; drain. Fill jars but leave room for solution. Shake berries down while filling jar. Cover with boiling water, juice, or syrup leaving $1 / 2$-inch headspace. | Process in boiling-water bath Pints 20 minutes Quarts 30 minutes <br> Process in a pressure canner Dial gauge -7 pounds <br> Weighted gauge - 10 pounds Pints 8 minutes Quarts 10 minutes |
| Cherries <br> (sour or sweet) | Hot | About $17 \frac{1}{2}$ pounds is needed to make 7 quarts. Stem and wash; remove pits if desired. If pitted, place in antioxidant solution. If unpitted, prick with a needle to prevent splitting. In large saucepan, add $1 / 2$ cup water, juice, or syrup per quart of fruit. Cover pan; bring to boil. Pack hot fruit with liquid to $1 / 2$-inch headspace. | Process in boiling-water bath Pints 20 minutes <br> Quarts 30 minutes <br> Process in a pressure canner <br> Dial gauge -7 pounds <br> Weighted gauge - 10 pounds <br> Pints 8 minutes <br> Quarts 10 minutes |
| Cherries <br> (sour or sweet) | Raw | Wash; drain. If removing pits place in antioxidant solution. If not pitting, prick skin to prevent splitting. Fill jars almost full with fruit. Shake down while filling. Cover with boiling water, juice or syrup to $1 / 2$-inch headspace. | Process in boiling-water bath Pints or quarts 35 minutes <br> Process in a pressure canner Dial gauge - 7 pounds Weighted gauge - 10 pounds Pints or quarts 10 minutes |

- continued -

| Fruit | Pack | Preparation | Canner Type - Process Time |
| :---: | :---: | :---: | :---: |
| Fruit purees <br> (except figs, tomatoes, cantaloupe, other melons, papaya, mango, or coconut) | Hot | About 16 pounds is needed to make 7 quarts. Stem, wash, drain, and remove pits if desired. Measure fruit into large saucepan and crush. Add 1 cup of water for each quart of fruit. Cook slowly, stirring often until fruit is soft. Press through sieve or food mill. Add sugar if desired. Reheat to simmering if sugar was added. Fill hot into jars leaving $1 / 4$-inch headspace. | Process in boiling-water bath Pints or quarts 20 minutes <br> Process in a pressure canner Dial gauge - 7 pounds Weighted gauge - 10 pounds Pints or quarts 8 minutes |
| Grapefruit and Orange sections | Raw | About 15 pounds is needed to make 7 quarts. Wash, peel, and remove membrane to prevent bitter taste. Fill jars with sections and hot water, juice, or syrup, leaving $1 / 2$-inch headspace. The flavor is best if equal parts orange and grapefruit sections are canned together. | Process in boiling-water bath Pints or quarts 15 minutes <br> Process in a pressure canner Dial gauge - 7 pounds Weighted gauge -10 pounds Pints 8 minutes Quarts 10 minutes |
| Peaches | Hot | About $17 \frac{1}{2}$ pounds is needed to make 7 quarts. Dip fruit in boiling water for 30 to 60 seconds until skins loosen. Dip quickly in cold water and slip off skins. Cut in half; remove pits and slice if desired. Place fruit in antioxidant solution and drain before boiling. In large saucepan, place fruit in water, juice, or syrup and bring to boil. Pack hot fruit into jars; cover with boiling liquid, leaving $1 / 2$-inch headspace. Raw packs make poor-quality peaches. | Process in boiling-water bath Pints 30 minutes Quarts 35 minutes <br> Process in a pressure canner Dial gauge - 7 pounds Weighted gauge -10 pounds Pints or quarts 10 minutes |
| Pears | Hot | About $17^{1 / 2}$ pounds is needed for 7 quarts. Wash, peel, halve, and core. Place fruit in antioxidant solution and drain before boiling. In large saucepan, place fruit in water, juice, or syrup and boil for 5 minutes. Pack hot fruit into jars; cover with boiling liquid, leaving $1 / 2$-inch headspace. Raw packs make poor quality pears. | Process in boiling-water bath Pints 30 minutes Quarts 35 minutes <br> Process in a pressure canner Dial gauge - 7 pounds Weighted gauge -10 pounds Pints or quarts 10 minutes |
| Rhubarb | Hot | About $101 / 2$ pounds is needed for 7 quarts. Trim leaves; wash, cut in $1 / 2$ - to 1 -inch pieces. In a large saucepan, add $1 / 2$ cup sugar for each quart of fruit. Let stand until juice appears. Heat gently to boiling. Fill jars without delay, leaving $1 / 2$-inch headspace. | Process in boiling-water bath Pints or quarts 20 minutes <br> Process in a pressure canner Dial gauge - 7 pounds Weighted gauge - 10 pounds Pints or quarts 8 minutes |

For more information

| Sources | $\begin{array}{l}\text { Adapted from the U.S. Department of Agriculture's Complete Guide to Home } \\ \text { Canning, revised June 2006. }\end{array}$ |
| :--- | :--- |
| Revised | $\begin{array}{l}\text { Reviewed by Cindy Fitch, Ph.D., R.D., Families and Health Programs Director, } \\ 2009 .\end{array}$ | by the WVU Extension Service to the exclusion of other products that may be equally suitable.

Programs and activities offered by the West Virginia University Extension Service are available to all persons without regard to race, color, sex, disability, religion, age, veteran status, political beliefs, sexual orientation, national origin, and marital or family status. Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Director, Cooperative Extension Service, West Virginia University. West Virginia University is governed by the WVU Board of Governors and the Higher Education Policy Commission.

