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CANNING FRUITS AND VEGETABLES

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# EXTENSION CIRCULAR NO. 180

## Canning Fruits and Vegetables

By ELEANOR ENRIGHT

### INSTRUCTIONS FOR COLD PACK METHOD OF CANNING

Canning is one of the easiest and most desirable methods of conserving fruits and vegetables in the home and the cold pack method is now recognized as the one which will insure the best results for home canners. The success of canning depends largely upon the thoro understanding of all the whys of each step. The cold pack method of canning has been slightly simplified by the omission of the hot and cold dip, except for greens, beets and a few other vegetables. This makes canning much easier for the woman to whom getting and heating water is a problem.

### EQUIPMENT

A hot water bath in which a wash boiler or deep kettle is used, a water seal canner and a pressure cooker give equally satisfactory results. The canning with the pressure cooker resembles most closely the commercial method and because of the high pressure, is the quickest and possibly the safest method to use. The United States Department of Agriculture recommends that pressure cookers be used for non-acid vegetables. If the water bath is used, it must be equipped with a wooden or metal rack which permits a free circulation of water underneath the jars and prevents them from knocking and breaking. Care must be taken that the lid of the water bath is tight-fitting so as to prevent too great a loss of steam.

### JARS

Any jars that can be sealed air-tight may be used. The color of the glass has nothing to do with the desirability of the jar. White glass should be used for exhibits, as it permits the true color of the contents to be seen. It is a wise plan to use mason jar tops only once for canning. Screw caps for mason jars, in which the porcelain is broken, should be discarded. Tops with unbroken porcelain may be used a second time, if they are boiled thoroly before using. The glass-top jars are preferable because of the ease with which they may be sterilized. Purchase only the best jar rings. Use but once. Be sure that you are buying new stock as the rubber deteriorates with age. Have all necessary equipment on hand before beginning canning so that time will not be lost when fruits and vegetables are ready to can.

### MATERIALS

Use only fresh, young fruits and vegetables. Do not try to save foods by using products which have been picked for some time or those which are too mature. Bacteria which occur in dust and soil and are likely to be found on any fruit and vegetable, develop much more rapidly after products are picked. Certain changes have already begun in fruits which are too ripe, which make sterilization very difficult and give an undesirable product. The shorter the time between the gathering of the product and the canning of it, the better the product will be.

### STEPS IN THE CANNING PROCESS

**Wash carefully all jars, rubbers and tops in hot suds and rinse by immersing in boiling water.**

**Grade and wash fruits or vegetables.** Do not use a variety of sizes in one jar, for the smaller pieces are apt to be overcooked and the larger ones undercooked. Careful grading facilitates packing and improves the appearance of the pack.

**Blanch and cold-dip if necessary (see time table).** Blanching consists in heating the product for a given time in hot

water or steam, before packing and processing. This process shrinks the product and makes it more pliable so that it can be packed more easily. The cold dip consists in plunging the blanched product into cold water so that it may be handled more easily. The cold dip should not last for more than five to ten seconds.

**Place rings on jar.** They are easier to adjust if put in place before the jars are filled.

**Pack carefully but not too closely.** Fruits packed too closely are liable to be bruised. Vegetables, especially corn, beans and peas, must be packed loosely enough so that the contents will slide easily from one end of the jar to the other. Too close packing or too little liquid makes thorough sterilization, especially in the center of the jar, difficult.

**Fill jars with hot liquid:** fruits with sirup, vegetables with hot water. Add one teaspoon of salt to each jar of vegetables. This salt is used for seasoning and has nothing to do with the keeping qualities of the product.

**Adjust tops.** 1. Leave side clamps up on glass-topped jars.

2. Screw-tops—adjust top and loosen one-fourth turn.

**Process for time required (see time table).** Processing is placing the filled jars in some kind of cooker and allowing the contents to cook for the required length of time. The water in the water bath cooker should be deep enough to reach the shoulder of the jar and as near the boiling point as possible, to prevent over-cooking which will occur when jars are placed in cold water and allowed to remain there all the time the water is heating. Jars which have been filled with hot sirup or water will not crack when put into the hot water bath. The water in the pressure cooker should come up to the false bottom or rack. Begin to count time for processing from the time the water boils or the desired pressure is reached.

**Remove jars from cooker at end of processing period.** Allowing the jars to remain in the cooker until the water has cooled causes overcooking and a loss of flavor.

**Complete seal.** Adjust the side clamps on glass-topped jars and tighten the caps on screw-topped jars.

**Test for leakage by inverting.**

**Store in cool dark place when cold.** Examine frequently for fermentation or spoilage. Peas, lima beans and corn should be canned in pint cans. Care should be taken that these vegetables are not packed too closely in the jar. See page 2, Packing.

**CAUTION**—Boil all vegetables for five minutes after taking them from the jars, before tasting.

Destroy all foods showing any signs of spoilage. Any off odor indicates spoilage. The contents should appear sound, normal in color and texture and the liquid should be free from any unusual cloudiness.

#### SIRUPS TO BE USED IN CANNING FRUIT

Thin sirup—1 measure sugar to 3 measures water.

Medium—1 measure sugar to 2 measures water.

Thick—1 measure sugar to 1 measure water.

Using fruit juice instead of water in making sirup emphasizes the flavor of the fruit and also helps to preserve the natural color of the fruit. The richness of the sirup to be used depends on the character of the fruit and the individual preferences of the consumers. In general, however, use thin sirup for sweet cherries, most berries and pineapple. Medium sirup should be used for peaches, plums, sour cherries. The thick sirup may be used if a very rich product is desired. It should also be used for gooseberries.

## TIME TABLE FOR CANNING FRUITS AND TOMATOES

Product	Method of Treatment Before Processing	Processing Period in Boiling Water 212° F.
Apples .....	Slice, quarter or halve, pack in jars and cover with boiling sirup. Or boil whole in sirup, or bake as for serving and cover with sirup and pack hot. Or pack hot in form of apple sauce.	Packed cold: 20 min. Packed hot: 5 min.
Apricots .....	Same as peaches.	
Blackberries..	Pack in jars. Fill with boiling hot, medium sirup.	20 minutes.
Blueberries ....		
Dewberries .....		
Huckleberries		
Logan blackberries		
Raspberries ....		
Cherries .....	Pack in hot jars, cover with boiling sirup, using thick sirup for sour cherries and medium for sweet. Or remove pits, add sugar as desired, bring to boil and pack.	Packed cold: 25 min. Packed hot: 5 min.
Currants .....	Same as berries.	
Strawberries .....	To each qt. add 1 cup of sugar and 2 tb. of water. Boil slowly for 15 minutes. Let stand overnight in the kettle. Reheat to boiling. Fill jars hot.	5 minutes.
Gooseberries .....	Same as other berries, but using thick sirup. Or prepare sauce using sugar as desired. Fill hot.	Packed cold: 20 min. Packed hot: 5 min.
Peaches .....	Scald, dip into cold water and peel. Cut into size desired, removing pits. Fill jars, then add sirup of desired consistency, in which several cracked peach pits have been boiled.	20 minutes.
Pears .....	Pare and cook for 4 to 8 minutes in boiling medium sirup. Pack hot in jars and fill with the boiling sirup.	20 minutes.
Pineapple .....	Peel, core, remove eyes. Cut into convenient sizes. Pack in jars. Fill with boiling thin sirup.	20 minutes.

**TIME TABLE FOR CANNING FRUITS AND TOMATOES.**

Product	Method of Treatment Before Processing	Processing Period in Boiling Water 212° F.
Plums .....	Prick. Pack in jars. Cover with boiling medium sirup. Or bring to boil, using sugar as desired. Pack hot into jars.	Packed cold: 20 min. Packed hot: 5 min.
Rhubarb .....	Cut in half-inch lengths. Add $\frac{1}{4}$ as much sugar as rhubarb by measure. Bake until tender, in covered baking dish. Pack in hot jars.	5 minutes.
Tomatoes .....	Scald and peel. Pack whole or cut in pieces. Cover with hot tomato juice. Add 1 t. salt to each quart.	15 minutes.

**TIME TABLE FOR CANNING VEGETABLES  
VEGETABLES THAT DO NOT NEED BLANCHING**

Name	In Boiling Water 212° F.	In Water Seal Canner 214° F.	In Steam Pressure Cooker 5-10 lbs.)
Asparagus	1 $\frac{3}{4}$ hours	1 hour	45 minutes
Beans, lima	1 $\frac{3}{4}$ hours	1—1 $\frac{1}{2}$ hours	45—50 min.
Beans, string	1 $\frac{3}{4}$ hours	1 hour	45 minutes
Cauliflower	1 $\frac{3}{4}$ —2 $\frac{1}{4}$ hours	1 hour	45 minutes
Corn	3 hours	1 $\frac{1}{2}$ —2 hours	1—1 $\frac{1}{2}$ hours
Peas	1 $\frac{3}{4}$ —2 $\frac{1}{4}$ hours	1—1 $\frac{1}{2}$ hours	45 minu. to 1 hr.
Pumpkin	1 $\frac{3}{4}$ hours	1 hour	45 minutes
Squash	1 $\frac{3}{4}$ hours	1 hour	45 minutes
Sweet potato	1 $\frac{3}{4}$ hours	1 hour	45 minutes

**VEGETABLES THAT NEED BLANCHING IN BOILING WATER**

Name	For Blanching	In Boiling Water 212° F.	In Water Seal Canner 214° F.	In Steam Pressure Cooker (5-10 lbs.)
Beets	Until skins are loose	1 $\frac{1}{2}$ hours	1 hour	45 minutes
Carrots	Until skins are loose	1 $\frac{1}{2}$ hours	1 hour	45 minutes
Peppers	3-5 minutes	1 $\frac{1}{2}$ hours	1 hour	45 minutes
Tomatoes	Until skins are loose	12-15 minutes	10 minutes	8 minutes

## VEGETABLES THAT NEED BLANCHING IN STEAM

Name	For Blanching	In Boiling Water 212° F.	In Water Seal Canner 214° F.	In Steam Pressure Cooker (5-10 lbs.)
All leafy greens				
Dandelion	Until soft	1½ hours	1 hour	45 minutes
Spinach	Until soft	1½ hours	1 hour	45 minutes
Swiss Chard	15 minutes	1½ hours	1 hour	45 minutes