

Oregon Agricultural College

Extension Service

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Safe Home Canning

The time-tables for home canning presented herewith supersede all previous recommendations of the Oregon Agricultural College or United States Department of Agriculture on that subject. This bulletin is printed by the Extension Service at this time to meet the demand for information as to safe practices, particularly from the standpoint of protection against botulinus poisoning. The material is furnished by the Bureau of Home Economics of the United States Department of Agriculture, and is approved by the Horticultural Products department of the Oregon Experiment Station.

GENERAL DIRECTIONS FOR CANNING*

Safe canning requires careful attention to every step in the process.

Use only clean, fresh, sound fruits and vegetables for canning. "Two hours from garden to can" is a good slogan. Discard for canning purposes all material showing *any* sign of spoilage.

Wash the fruits and vegetables thoroughly and prepare as for cooking. Those with earth clinging to them must be washed with special care since the soil may contain bacteria that are very difficult to kill.

Scald apricots, peaches, and tomatoes in order to remove peel more easily.

A short pre-cooking of the fruits and vegetables shrinks them and makes it possible to fill the jars hot. No food value is lost if the hot liquor that has cooked out is used, instead of hot water, to fill the jars.

The material should be filled into the jars as hot as possible so as to decrease the time required for the material in the center of the can to reach the temperature of the canner. This is especially important with thick, pasty mixtures, since they heat through very slowly. Work quickly so that cans will not cool while waiting, and get them into the canner as rapidly as possible.

Partially seal glass jars by adjusting springs halfway or placing screw tops on loosely, and completely seal tin cans before placing in the canner.

It is recommended that the pressure canner be used for all vegetables except tomatoes. The water-bath canner or the pressure canner used at 212° F. is preferable for fruits and tomatoes. It is desirable that the pressure cooker be equipped with both thermometer and pressure gauge. In using the pressure cooker, wait until steam flows from the pet cock before closing; otherwise the pressure is no indication of the temperature. Commence to count time when pressure reaches the desired point, not before.

Seal glass jars as soon as removed from the canner. The texture of products in tin is improved if the cans are cooled quickly by plunging in cold water.

*Bureau of Home Economics, United States Department of Agriculture.

All cans and jars should be marked so that each lot can be identified. They should be kept under observation at room temperature for at least a week. Discard any showing signs of spoilage and keep others of same lot under observation until it is certain that they are keeping.

Sirups. *Thin sirup* is made by bringing to the boiling point one part of sugar and three parts of water. *Medium sirup* is made by bringing to the boiling point one part of sugar and two parts of water. *Thick sirup* is made by bringing to the boiling point one part of sugar to one part of water. Sirup may be made using juice from fruits instead of water.

TIME-TABLE FOR CANNING FRUITS AND TOMATOES*

Product	Method of treatment before processing	Processing period for quart jars
Apples	Slice, quarter, or halve, and 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 minutes at 212° F. Packed hot: 5 minutes at 212° F.
Apricots	Same as peaches.	
Berries: Blackberries Blueberries Dewberries Huckleberries Loganberries Raspberries	Pack in jars. Fill with boiling hot, medium sirup.	20 minutes at 212° F.
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 minutes at 212° F. Packed hot: 5 minutes at 212° F.
Currants	Same as berries.	
Figs	Sprinkle 1 cup of soda over 6 quarts of figs. Add 1 gallon of boiling water. Allow figs to stand in this 5 minutes. Drain and rinse well. Add 2 quarts boiling medium sirup. Boil for 1 hour. Fill in jars. Cover with hot sirup.	20 minutes at 212° F.
Gooseberries	Same as berries but using thick sirup. Or prepare sauce using sugar as desired. Fill hot.	Packed cold: 20 minutes at 212° F. Packed hot: 5 minutes at 212° F.
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 at 212° F.
Pears	Pare and cook 4-8 minutes in boiling medium sirup. Pack hot in jars and fill with the boiling sirup.	20 minutes at 212° F.
Plums	Prick. Fill in jars. Cover with boiling medium sirup. May be brought to boil using sugar as desired. Fill hot into jars.	Packed cold: 20 minutes at 212° F. Packed hot: 5 minutes at 212° F.
Rhubarb	Cut in half-inch lengths. Add one-fourth as much sugar as rhubarb by measure. Bake until tender in covered baking dish. Pack in hot jars.	5 minutes at 212° F.
Strawberries	To each quart add 1 cup of sugar and 2 tablespoons of water. Boil slowly for 15 minutes. Let stand overnight in the kettle. Reheat to boiling, fill jars hot.	5 minutes at 212° F.
Tomatoes	Scald and peel. Pack whole or cut in pieces. Cover with hot tomato juice. Add 1 teaspoon salt to each quart.	25 minutes at 212° F.

*Bureau of Home Economics, United States Department of Agriculture.

These time periods are based on the use of quart glass jars. In using pint glass jars five minutes less time may be used, and for No. 2 or 3 tins ten minutes less.

When the fruits are pre-cooked and packed hot, a five minutes' process is recommended to insure keeping and to give a vacuum seal.

TIME-TABLE FOR CANNING NON-ACID VEGETABLES

Use Pressure Cooker for These

Pack vegetables as near boiling hot as possible, using additional boiling water if necessary. Place as soon as filled in hot canner. Add 1 teaspoon salt to quart to all vegetables, and 1 tablespoon sugar, if desired, to corn and peas.

This department does not recommend that beets, carrots, mature lima beans, pumpkin, and squash be canned. Root crops are better stored as such; pumpkins and squash may be successfully stored. Lima beans and okra may be satisfactorily dried.

Product	Method of treatment before processing	Processing period for quart jars
Asparagus	Tie in even bundles, place in saucepan with boiling water over lower tough portion, cover tightly and boil 4 to 5 minutes. Or cut in $\frac{1}{2}$ inch lengths, bring to boil in water to cover and pack into jars.	40 minutes at 10 pounds pressure, or 240° F.
Beans, string	Heat to boiling with water to cover. Pack into jars.	40 minutes at 10 pounds pressure, or 240° F.
Beans, lima	Can only young and tender beans, using method suggested for peas.	60 minutes at 10 pounds pressure, or 240° F.
Corn	Cut off without pre-cooking. Add boiling water to cover and heat thoroughly.	90 minutes at 15 pounds pressure, or 250° F.
Greens, including spinach	Steam or heat in covered vessel until completely wilted, using just enough water to prevent burning. Pack hot into jars, taking care that the material is not packed too solidly and there is liquid to cover.	90 minutes at 10 pounds pressure, or 240° F.
Peas	Use only tender young peas. Bring to boil with water to cover.	50 minutes at 10 pounds pressure, or 240° F.
Sweet potatoes	Boil or steam for 10 or 15 minutes until skins slip off readily. Peel quickly and pack hot.	60 minutes at 10 pounds pressure, or 240° F.

STEPS IN CANNING

1. Clean and prepare the product.
2. Pre-cook, parboil, or scald products that require it. If the vegetable or fruit is to be peeled, dip in cold water after scalding or parboiling. If no preliminary cooking is needed, put at once into jars.
3. Pack products in jars that will seal air-tight.
4. Add salt, and hot water if vegetable stock does not cover vegetable; add sirup or fruit juice to fruits.
5. Adjust rubbers and tops.
6. Process for required time.
7. Remove from canner and finish sealing.
8. Place out of draft but keep under observation for at least a week.

DIRECTIONS FOR EXAMINING ALL CANNED FOOD BEFORE USE*

To be sure that food is wholesome, inspect carefully before using.

Before opening. *Tin cans:* Both ends should be flat or curved slightly inward. Neither end should bulge or snap back when pressed. All seams should be tight and clean, with no trace of leaks. *Glass jars:* The cover, if metal, should be firm and flat or curved slightly inward. There should be no sign of leakage around the rubber ring or elsewhere. The contents should appear sound, normal in color, and the liquid free from unusual cloudiness.

When opened. As the can is being opened, notice whether there is an outrush of air or spurting of the liquid. These indicate spoilage. If the air sucks inward this is a good sign and shows that the vacuum seal has not been broken.

Smell the contents at once. The odor should be characteristic of the product. Any "off" odor probably indicates spoilage.

Look at the contents carefully to see whether they appear sound and natural in color and texture.

*Bureaus of Chemistry, Home Economics, and Plant Industry, United States Department of Agriculture.

If the can is tin, notice the appearance of the inside. It should be clean and bright or well lacquered, not extensively blackened or markedly corroded.

DESTROY ALL FOOD SHOWING ANY SIGN OF SPOILAGE. TAKE NO CHANCES.

UNDER NO CIRCUMSTANCES TASTE ANY CANNED VEGETABLE BEFORE BOILING.

BOIL VIGOROUSLY FOR 5 MINUTES THE VEGETABLES LISTED ABOVE BEFORE USING, even though there is no sign of spoilage. In case the liquid in the can is not sufficient to cover the product, add boiling water and boil for 5 minutes. Smell the hot food carefully. Heating sometimes brings out odors not noticed in cold canned food.

If the foregoing instructions are followed, there need be no fear of botulism or other poisoning from canned food.