Simplified Methods for Home and Community Canning

To Be Used By Relief Committees

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Note: For instruction in canning non-acid vegetables and meats, see North Carolina Extension Circular No. 114.
FOREWORD

In "Simplified Methods For Home and Community Canning" the hot-water canner is recommended, as directions are given only for products that can be safely canned at boiling temperature, 212 degrees, F. This list includes only tomatoes, fruits, freshly-gathered, young, tender string beans, and a pre-cooked soup mixture containing a large proportion of tomatoes.

In communities where there are pressure canners, North Carolina Extension Circular No. 114 should be used, as this bulletin includes directions for canning meats and non-acid vegetables such as corn, peas, beans, spinach, squash, okra, etc.

Requests for Circular No. 114 should be sent to Mrs. Jane S. McKimmon, State College, Raleigh, N. C.

HOT-WATER CANNERS

Several convenient types of canners are on the market. The simplest hot-water outfit is one to be placed on the kitchen stove. Another, more complete, has a fire box attached and is used out-of-doors. These outfits also include blanching trays, tongs for handling hot jars, and a false bottom.

The type of canner should be chosen with reference to the kind and amount of canning to be done. The small hot-water canner is the least expensive of the commercial outfits for home canning. For inexperienced people it is also more easily handled. This type of canner is preferable for canning fruits and tomatoes. They are canned safely at boiling temperature, and the texture, flavor, and color of the finished products are good.

A wash boiler, lard tin or any vessel that has a tight cover and is large enough to hold the required number of cans or jars will make a satisfactory canner, provided that it is fitted with a wooden rack or a piece of wire mesh to prevent jars from breaking by touching the bottom of the canner.

SOME THINGS TO BE OBSERVED WHEN CANNING

1. If hot-water canner is used, be sure the canner is partly filled with water before fire is built.

2. Keep the water at a jumping boil and do not allow fire to die down for an instant while cans are in the canner.

3. Keep cover on canner every moment of the boiling time. Steam plays a large part in cooking the contents of a can.
4. If possible, use two canners, one for blanching fruit and the other for canning. A large pot set over a fire will serve for blanching.

5. The quality or grade of the pack depends on the number of whole fruits or uniform pieces of fruit in the can, the color of the fruit, the weight, and the flavor.

6. The flavor is often injured by letting peeled fruit stand too long before cooking. Prepare at any one time as many cans only as can be processed immediately.

7. Let “Straight From Vine to Can” be the motto. Never can stale fruit.

8. Mark every tin can as it is filled with the name of its contents. A pencil may be used, as the writing will not boil off. This prevents confusion when labeling.

Use No Artificial Preservatives. Artificial preservatives in the form of “Acids,” “Preserving Powders,” and “Formulas” of various kinds should not be used. Some of these are injurious to health and are forbidden by the pure food laws.

The cheapest, surest, and only absolutely safe way to sterilize is by means of heat. The small amount of sugar and salt used in canning fruits and vegetables does not act as a preservative. It is added for flavor.

MEANING OF TERMS USED

Sterilizing—Boiling to destroy bacteria.
Blanching—Placing vegetables or fruits in a cotton bag or wire basket and plunging into boiling water before packing jars or cans to be processed. This improves flavor and softens product, so that more can be placed in a can.
Processing—Boiling fruits or vegetables in the jar or can.

CANNING IN GLASS

Glass jars are more economical for home canning than tin cans, as they can be used over and over again and the cost be spread over several years.

Glass jars with glass tops are preferable. When using screw top jars, new tops are preferable. Old tops should be thoroughly scrubbed and sterilized. See that wire clamps on glass top jars are in good condition before using.

Jar Rubbers.

It is important that good new rubbers be used, as the success of canning depends largely on the quality of the rubber rings used. Do not use rubbers the second time.

Sterilizing the Jars.

To sterilize glass jars, place them on a rack in the canner in tepid water. Do not fill the canner with more than three inches of water. Place cover on the canner. Bring the water to a boil and steam jars 8 minutes.

Rubbers should be sterilized by placing in a bowl of boiling water and allowing them to remain for three minutes.

Packing and Processing the Jars.

Remove the jars from the canner, prepare the fruits or vegetables, and pack them right into the neck of the jars, filling with water, brine, or syrup, as the packing proceeds. Wipe clean the rim of the jar and place the
rubber thereon. Push spring down lightly and place jar in the canner holding tepid water. Never place a cold jar in boiling water, as there is danger of breakage.

When the water begins to boil, count time. Consult the recipe, noting the exact number of minutes, and never cut this time short. Have a clock handy and do not guess at time.

Leave the jars lightly sealed during the whole processing, and when the time is up, remove one at a time from the canner, seal tightly, turn jars upside down, and set aside. After screw top jars cool, do not tighten tops again as the seal will be broken and contents will spoil.

CHECKING UP RESULTS

Mark all canned products that those in each batch can be distinguished. Examine the glass jars for signs of leakage. Hold canned products for a week or ten days, where they can be examined at least once a day to be sure that they are keeping. If the contents of any jars or cans show signs of spoilage, examine all of that lot carefully. After this store the canned goods.

CANNING IN TIN

Tin Cans.

Sanitary cans with an opening as large as the top of the cans should be used.

The No. 3 can is popular for tomatoes, peaches, etc., and holds a quart. No. 2 can is the next size smaller, and is used generally for peas, corn, soup mixture, etc. No. 10 is the so-called gallon, but holds slightly less.

Wash and sterilize all cans which are to be used. Place them in a canner where water is boiling. Let them remain ten minutes. Remove and turn upside down on clean surface until used.

After fruit or vegetables are blanched, pack them in sterilized cans until the can is filled to about one-quarter inch of the top. Begin to pack firmly with spoon when first bit of fruit or vegetable is put into a can, pressing down gently until the can is filled. Add hot brine or syrup as packing proceeds. Tomatoes must have no water added. There will be sufficient juice to fill crevices.

After the can has been sealed, it is ready for the processing. Processing is sterilizing by cooking continuously for a given length of time. Place cans for processing in trays and lower into the boiling water. The temperature of the water will then be reduced. Wait until boiling begins again before processing time is counted. Keep the water boiling every minute of the time during processing and remove cans promptly when time is up. Have a clock or watch at hand. Do not guess.

CANNING FRUITS AND BERRIES IN GLASS AND TIN

Dewberries, Blackberries and Raspberries.

To can dewberries, blackberries and raspberries, the following method will prove satisfactory: Gather berries when ripe but firm. Place in muslin sack and plunge into boiling water one minute (blanch). This will slightly soften the berries and allow the packing of almost twice as many in a can or jar. It will also prevent the condition where berries rise to the top of the jar.
Pack the sterilized can to within one-quarter inch of the top with berries. Fill glass jars quite full. Fill the spaces and cover the berries with a syrup made of one gallon of water and one pint of sugar.

The flavor of all canned berries is finer when syrup or sugar is added.

Process the filled No. 3 tin cans 8 minutes.

Process the filled quart glass jars 13 minutes, permitting jars to remain lightly sealed while processing. Lift jars from the canner and seal tightly immediately.

Canned strawberries do not make a very attractive product. They shrink badly and lose their color. If they are canned, the recipe for blackberries may be followed.

**Huckleberries**—Huckleberries should be canned just as blackberries. Care should be taken that they are well stemmed and perfectly clean before blanching.

Huckleberries should be canned in glass jars as the acid will eat through the seams of a plain tin can.

**Peaches**—Peaches should be selected when they are fully ripe and of a uniform size and color. Never pack fruit of varying colors in the same jar.

**Peeling Peaches**—When semi-cling peaches, such as the Elberta, or a soft peach is canned, they may be peeled by first plunging into boiling water and then into cold water. It is difficult to peel ripe soft peaches without dipping.

After peeling, cut peaches into halves and remove the pit. Have ready a boiling syrup of 1 pound and 14 ounces of sugar and 1 gallon of water. Add a few cracked peach pits to the boiling syrup to improve the flavor and remove when syrup is cold. Drop peaches into boiling syrup one-fourth at a time, allowing them to cook for 1 minute, or until tender but not soft.

Place in jars in overlapping layers with the pit side down and the stem end towards the center of the jar. Add syrup bit by bit when packing.

Process a quart jar 25 minutes.
Process No. 3 can 20 minutes.

**Canned Apples**—Late fall and winter apples which are slightly acid are best for canning. Peel, cut, and drop into a brine made of 21/2 ounces of salt and 1 gallon of water. Cook in syrup made of one pound and fourteen ounces of sugar and one gallon of water.

Process No. 3 cans 8 minutes.

When canning apples in glass, process quart jars 15 minutes.

It is advisable to make mellow summer apples into apple sauce. Pour sauce hot into quart jars and process 15 minutes.

**Canned Pears**—The Bartlett pear is best for canning. Select ripe, sound, medium-sized fruit (cut in halves, or if large in quarters). Remove all the hard portions around the seed and dip in brine similar to that used for apples to prevent discoloration.

Plunge the halves or quarters into boiling syrup and allow them to cook until they can be pierced with a straw, remove and pack closely in a No. 3 can or quart jar. Cover with a boiling syrup made of 3 pounds and 9 ounces of sugar and 1 gallon of water.

Process No. 3 can 20 minutes.
Process quart jar 25 minutes.
Canned Cherries.—Cherries are usually canned without the seed, and should be put in glass jars. Large wax cherries are often canned whole. They should be blanched for 1 minute.

Pack seeded or whole cherries in jar to within one-quarter inch of top, fill jar with syrup made of 3 pounds and 9 ounces sugar and 1 gallon of water.

Process quart jars 30 minutes.

Process pint jars 20 minutes.

Fruit may be successfully canned without the use of sugar; and when there is a scarcity, it is sometimes necessary. Sugar is not used to preserve the fruit, but to bring out the flavor and improve the taste. Even a small amount of sugar will greatly improve flavor.

Canning Vegetables in Glass and Tin

Canned Tomatoes.—Select only ripe tomatoes for canning.

Blanch for one minute. The skin may then be removed easily. Do not peel any more than may be immediately canned, as tomatoes ferment quickly.

Be careful to remove hard part of tomato with sharp knife at stem end.

Pack into cans as many whole tomatoes as possible, cutting them only when they are too large to slip in. Fill can to within one-quarter inch of top, press gently and shake down fruit to fill crevices.

A level teaspoonful of sugar and a level teaspoonful of salt added to a No. 3 can or a quart jar of tomatoes improve the flavor of the product.

Use no water with tomatoes. If the can is properly filled the juice will be sufficient.

Process No. 3 tin cans 22 minutes.

When canning tomatoes in glass jars, fill quite full and process quart jars 25 minutes.

String Beans.—To can string beans, select those that are young and tender and which have few strings. The Green Pod Stringless is a good variety. If the beans are gathered when young and tender, and the strings removed, a good product results. Snap the beans at both ends, string, and place in a thin cotton bag, and dip in boiling water from 3 to 5 minutes. This improves the flavor of the beans and allows more to be packed in a can. Pack closely to within one-quarter inch of the top, and fill with hot water. Add 1 level teaspoonful of salt.

Process No. 3 cans 1 hour and 15 minutes.

Beans should be canned the same day they are gathered. "Straight From the Vine to the Can" should be the motto.

Old beans necessitate processing with steam pressure.

When canning string beans in glass jars, process quart jars 1 hour and 25 minutes.

Soup Mixture.—Corn, butterbeans, and okra are difficult to can in a hot-water canner without spoiling unless they are combined with tomatoes, as the acid in tomatoes helps to destroy the bacteria. Therefore, it is recommended that these products be made into soup mixture unless a pressure cooker is available.

Five quarts tomatoes, 2 quarts corn, 2 quarts okra or lima beans, 2 tablespoonfuls sugar (level), 2 tablespoonfuls salt (level). Scald and peel tomatoes, cutting out green or hard spots. Chop and measure. Cut young and tender field or sugar corn from cob. Slice okra in rings one-half inch thick. Place all in open agate kettle and boil until
thick. Pour into No. 2 cans while hot, seal, and process 1 hour and 15 minutes. Process No. 3 can 1 1/2 hours.

Use an asbestos mat under the kettle when boiling soup mixture and stir constantly. It is very easily scorched.

When canning soup mixture in glass jars, process quart jars 1 1/2 hours. Process pint jars 1 hour.

Sauerkraut.—For making sauerkraut in the home, 4, or 6-gallon stone jars are considered the best containers unless large quantities are desired, in which kegs or barrels may be used.

Select only mature, sound heads of cabbage. After removing all decayed or dirty leaves, quarter the heads and slice off the core portion. For shredding, one of the hand-shredding machines which can be obtained on the market is much the best, although an ordinary slaw cutter or a large knife will do.

In making sauerkraut the fermentation is carried out in a brine made from the juice of the cabbage which is drawn out by the salt. One pound of salt for every 40 pounds of cabbage makes the proper strength of brine to produce the best results. The salt may be distributed as the cabbage is packed in the jar or it may be mixed with the shredded cabbage before being packed. The distribution of 2 ounces of salt with every 5 pounds of cabbage probably is the best way to get an even distribution.

Pack the cabbage firmly, but not too tightly, in the jar or keg. When full, cover with a clean cloth and a board or plate. On the cover place a weight heavy enough to cause the brine to come up to the cover.

If the jar is kept at a temperature of about 86 degrees F., fermentation will start promptly. A scum soon forms on the surface of the brine. As this scum tends to destroy the acidity and may affect the cabbage, it should be skimmed off from time to time.

If kept at 86 degrees F., the fermentation should be completed within 10 days.

A well-fermented sauerkraut should show a normal acidity of approximately plus 20, or a lactic acid percentage of 1.8.

After fermentation is completed, set the sauerkraut in a cool place. If the cabbage is fermented late in the fall, or if it can be stored in a very cool place, it may not be necessary to do more than keep the surface skimmed and protected from insects, etc., otherwise it will be necessary to resort to one of the following measures to prevent spoilage.

(1) Pour a layer of hot paraffin over the surface, or as much of it as is exposed around the cover. Properly applied to a clean surface, this effectually seals the jar and protects the contents from contamination.

(2) After the fermentation is complete, pack the sauerkraut in glass jars, adding enough of the “kraut” brine, or a weak brine made by adding an ounce of salt to a quart of water, to completely fill the jars.

The second method is much to be preferred to the first. If it is heated before sealing in a water bath until the temperature of the center of the jar is about 160 degrees F., and then stored in a cool place, sauerkraut packed in this way will keep in good condition for a year or longer.

In the commercial canning of sauerkraut, where conditions and length of storage can not be controlled, heat must always be used.
SPECIAL DIRECTIONS TO BE FOLLOWED IN THE MOUNTAIN SECTION OF NORTH CAROLINA

When canning in a hot-water canner the temperature of water does not go beyond the boiling point (212 degrees F.) at sea level. The boiling point of water depends upon the atmospheric pressure which changes with altitude. Water boils at approximately two degrees lower for every 1000 feet above sea level, therefore, it is necessary to cook products longer in high altitudes, as the lower temperatures will not sterilize as readily as the sea level boiling point. As an example: In Madison and Avery Counties at an altitude of 3,000 feet above sea level, water will boil at 206 degrees F., which is six degrees lower than boiling point at sea level.

If the altitude is more than 1,000 feet above sea level, use the following time table for canning:

- **Tomatoes:** No. 3 tin can—Process 27 minutes.
- **Tomatoes:** Quart glass jar—Process 30 minutes.
- **String Beans:** No. 3 tin can—Process 1 hour and 38 minutes.
- **String Beans:** Quart glass jar—Process 1 hour and 50 minutes.
- **Soup Mixture:** No. 2 tin can—Process 1 hour and 30 minutes.
- **Soup Mixture:** No. 3 tin can—Process 1 hour and 50 minutes.
- **Soup Mixture:** Quart glass jar—Process 1 hour and 50 minutes.
- **Berries:** No. 3 tin can—Process 10 minutes.
- **Berries:** Quart glass jar—Process 16 minutes.
- **Peaches:** No. 3 tin can—Process 25 minutes.
- **Peaches:** Quart glass jar—Process 30 minutes.
- **Apples:** No. 3 tin can—Process 10 minutes.
- **Apples:** Quart glass jar—Process 16 minutes.
- **Pears:** No. 3 tin can—Process 25 minutes.
- **Pears:** Quart glass jar—Process 30 minutes.
- **Cherries:** Quart glass jar—Process 35 minutes.
- **Cherries:** Pint glass jar—Process 25 minutes.

Altitude does not affect the temperature in a steam pressure cooker.