


# FRUIT *and* VEGETABLES

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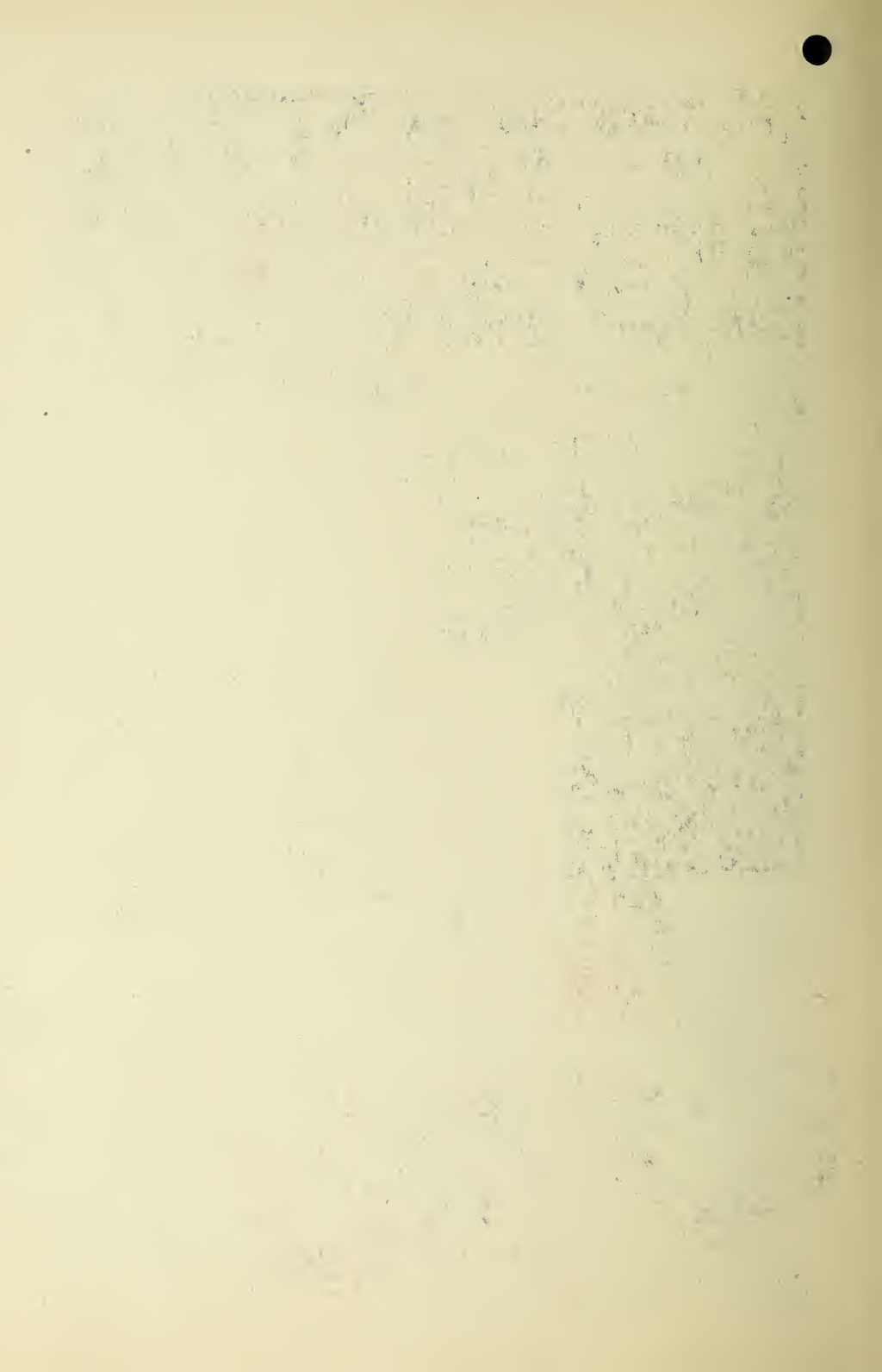
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## EAT MORE CANADIAN FRUIT

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**E**AT Canadian Fruits and Vegetables while they are in season and can, dry and store the surplus for winter use.

Canadian-grown Fruits and Vegetables are conducive to health and greater and more regular use of them throughout the year would have a positive beneficial effect.

Canada produces, cans and preserves more than enough fruit and vegetables, unexcelled in quality, flavour and attractiveness, to supply all the possible demands of Canadians, but in spite of this fact the amount of these products being imported is rapidly increasing. The increase is largely in the canned, dried and dehydrated products and it is with a hope therefore of encouraging Canadians to demand Canadian grown fruits and vegetables, either canned or for their canning and preserving requirements, that this Booklet of instructions and recipes has been prepared.

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## EAT MORE CANADIAN VEGETABLES

## READ THESE "DON'TS" BEFORE YOU FAIL

You may then not need to read them after

**DON'T** fail to test jars with new rubbers before sterilizing.

**DON'T** try, at first, to can vegetables in any jar larger than a quart. The smaller the jar the easier it is to sterilize.

**DON'T** use old rubbers. It is cheaper to buy new rubbers than to lose your vegetables.

**DON'T** try to use a wide rubber on a screw-top jar. The wide rubbers fit the spring-top jar and the narrow rubbers the screw-top.

**DON'T** shorten the time of sterilization.

**DON'T** fail to seal jars tightly. See that the spring is adjusted to give good pressure on spring-top jars and that the screw-top does not slip on gem jars.

**DON'T** let the heat down so that the water fails to boil. Keep it jumping.

**DON'T** use a doubtful sealing jar for vegetables. Put some easy keeping product such as pickles, jams or jellies in chipped or uneven jars.

**DON'T** use a dirty dish cloth to wipe off the top of the jar. It may undo all your work.

# SUCCESSFUL HOME CANNING OF CANADIAN FRUITS AND VEGETABLES

**THE THEORY OF CANNING**—The canning of vegetables in glass sealers in the home is comparatively a new art, and its success depends upon the application of certain well-known laws; for instance, it is known that:

(1) All decays, moulds, fermentations and rots of food are caused by minute forms of life known as bacteria, yeasts and moulds.

(2) These minute forms of life exist in the atmosphere and are found in and on everything in nature, especially in and on food products.

(3) After any food product, especially fruit or vegetable, has reached a certain stage of ripeness, these minute forms of life, if conditions are favourable, will increase exceedingly rapidly by feeding on the food and destroying it.

(4) Sufficient heat for a sufficient length of time will destroy any form of life.

**THE SUCCESSFUL PRACTICE OF CANNING**—The success in the practice of canning may be explained in two sentences.

First, the material to be canned must be subjected to enough heat to kill all those forms of microscopic life found in or on it.

Second, after such forms of life have been killed the food product must be hermetically sealed to protect it from sources of re-infection, such as the atmosphere or the hands. The product will then keep indefinitely. This has been proved by thousands of experiments.

Non-success in household canning is due, therefore, either to insufficient sterilization or cooking or to imperfect sealing.

## NO DANGER FROM POISONING

**There is not the slightest danger from poisoning** as a result of eating vegetables and fruits canned by the Cold Pack Method, or any other methods recommended in this pamphlet, **Provided the instructions as given are followed.**

No bacterial life exists, or can exist, in a successfully canned product. *Bacillus botulinus* will never be found in properly-canned products.

Cooking canned vegetables for ten minutes at the boiling point after opening the jar for use, will even remove any danger in cases where perfect success has not rewarded the efforts of those first attempting to can. This would be true also of fruits, like peaches and pears.

## SOME EXPLANATIONS

Modern canning depends for success upon heat, rubber rings and perfect jars. The one kills all decay organisms, the other keeps them out.

When "sterilization" is advised it means you are to boil in boiling water or steam long enough to kill the bacteria, moulds, etc.

When "perfect sealing" is advised it means you are to use a new rubber band and a jar which can be depended upon to keep out all air.

If you can by the method which follows you will have fruit and vegetables which will keep for years. If you have never tried before, why not this year?

## "THE COLD PACK METHOD" OF CANNING

This is a phrase which is used to describe the most common method of handling the produce. Nearly all vegetables are canned this way. They are packed into the sealers cold and the cooking follows in one of the three ways described in the next three paragraphs.

Sterilizing may be done in three different ways, each of which has its advantage.



**(1) SINGLE BOILING**—This is the commonest method and if carried out carefully there will be but few failures. A common pot or wash boiler is used by making a false bottom of slats to keep the jars off the bottom and thus prevent breakage. The water in the boiler should come half-way up the jars, or with vegetables it should cover the jars at least one inch. A steam cooker such as is ordinarily used in the kitchen works well and is a little more convenient than the wash boiler.

See page 25 for time table of sterilizing different products.

**(2) INTERMITTENT OR FRACTIONAL STERILIZATION**—This method is the same as No. 1, except that the sterilization of the food is divided into three periods upon three successive days. If followed out properly there would be absolutely no failures. Thus instead of boiling three hours at once the jars are boiled one hour each day for three days. However, it requires more handling of jars, more fuel and more work, which is the disadvantage.

**(3) PRESSURE STERILIZATION**—This is carried out in a pressure cooker that can be closed and thus produce steam under pressure. This is the most effective and rapid method, but special apparatus is required. The advantage of the steam pressure method is that it requires shorter time and is more thorough. Small pressure canners can be obtained in which from six to thirty pounds pressure can be produced, but as these cost more than the average housewife cares to expend, instructions in this pamphlet outline a canning method where the ordinary wash boiler may be employed with a slat rack upon which to place the cans.

Other utensils recommended consist of enamel kettle, wire basket, or cheesecloth, enamel colander, wire strainer, glass measuring cup, large spoons, fruit masher, pint and quart measure, clean towels and glass containers.

## HOW TO SCALD OR BLANCH

Fig. 3 shows the method of scalding or blanching garden produce. Tomatoes, peaches, etc., are placed in cheese cloth of double thickness and dipped into boiling water, as indicated in the illustration. In the case of greens, blanching greatly reduces the bulk and a full pack is then made possible. For the time for different products see Canning Chart on page 25.

**SCALDING** is for the purpose of loosening the skin, so that fruits like tomatoes and peaches, for instance, may be peeled easily.

**BLANCHING** is more thorough than scalding and consists of leaving the product in a large amount of boiling water for a short time. Blanching gives a thorough cleaning and destroys all bacteria on the surface of the product. It often helps to improve the flavour and in some instances it removes strong or objectionable odours or flavours. Blanched peaches and pears have a more transparent appearance, better texture and a mellow flavour.

## STEPS IN THE CANNING PROCESS

1. Prepare the canning utensils and select jars and tops. Make sure that everything is clean and that jars are air-tight.

2. Sterilize jars 15 minutes by putting them into a boiler with a false bottom. The water in the boiler should be cold and at least half-way up the jars; the jars upright and partially filled with water, but not touching each other; bring slowly to the boil and boil 15 minutes.

3. Wash fruit or vegetables in clean, cold water. Prepare the vegetables as you would if getting them ready to boil for dinner, and the fruit as for serving.

4. **BLANCH**—This is done by putting material for canning into a cheese cloth, or a wire basket, and dipping into boiling water from one to twenty minutes.

5. **COLD DIP**—Immediately upon removal from boiling water the product should be plunged into cold water and left till it feels cold to the touch.

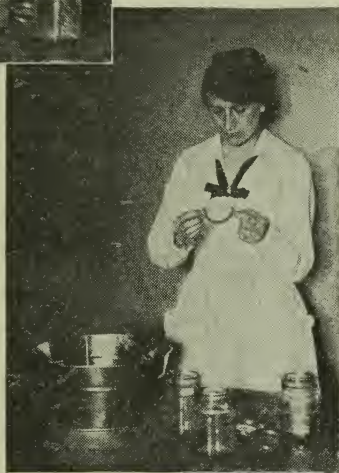


*Fig. 1.*

*Testing jar.*

*Fill each jar half full of warm water, adjust the rubber, put on the cover and snap the wire clamp; turn jar upside down to see if it leaks.*

*Fig. 2.*  
*Testing rubber by folding the ring and pressing tightly, turn it over and reverse the fold in the same place. A good rubber ring will show no break where the rubber has been folded*



*Fig. 3.*

*Blanching, using a square of cheesecloth.*



6. **COLD PACK**—Pack the cold vegetables or fruit into the sterilized jars.

7. To the vegetables add salt—one teaspoon to one quart jar and fill the jar to overflowing with boiling water.

8. To the fruit add syrup according to instructions in the syrup table.

9. Put on a new rubber and the glass top, but only partly seal the jar.

10. Sterilize by putting the jars into a boiler with false bottom. The water in the boiler should be hot—at least half-way up the outside of the jars and the jars upright. For time see schedule on page 25 of bulletin. Take time after the water starts to boil.

11. Remove from boiler at end of the required time and seal the jars immediately by tightening the covers. The cover must be perfectly tight and must not be opened until needed for use. Invert to test for leaks.

12. When cool, wash jars, label and date. Store in a dark, cool, DRY place or wrap each jar in paper to prevent bleaching.

### THE SYRUP TABLE

For sweet fruits.....2 cups sugar to 4 cups boiling water.

For slightly acid fruit.....4 cups sugar to 6 cups boiling water.

For acid fruits.....2 cups sugar to 2 cups boiling water.

For very acid fruits.....4 cups sugar to 2 cups boiling water.

The amount of sugar used will also depend on individual taste, but too much sugar spoils the natural flavour of the fruit.

In all cases boil the sugar and water together for 5 minutes, and strain if not clear.

For quart jars of large fruit about 1 pint of syrup is required. For quart jars of small fruit about  $\frac{1}{2}$  pint.

## CANNING RECIPES IN DETAIL

### FRUITS

**CHERRIES**—The large black and sweet white cherries are usually packed unpitted, while the reverse is true of the sour cherries. The unpitted cherries present a better appearance, and many people like the distinctive flavour which the retained pit gives to the product. When cherries are canned whole they should be blanched in hot water at about 180° Fahrenheit for twenty or thirty seconds. This will slightly soften the fruit and prevent splitting. Then drop cherries into a cool syrup and they will plump considerably before packing cold into jars. For sour cherries use a syrup made from two cups of sugar to 2 cups of water, and for sweet cherries use a syrup made from two cups of sugar and 4 cups of water. Sterilize twenty minutes.

**CHERRY MOCK OLIVES**—Select and wash firm ripe cherries; pack unpitted and with stems attached in sterilized jars; press gently into place layer by layer, cover with weak cold vinegar made of 1 teaspoon salt, 1 cup cold water, 1 cup cider vinegar, 3 tablespoons brown sugar,  $\frac{1}{4}$  oz. stick cinnamon, 2 tablespoons whole cloves.

Tie spices in cheese cloth; put all in a sauce pan and boil 5 minutes; cool and remove spice; pour syrup over cherries and seal, using sterile rubbers and lids.

**FRUIT MACEDOINE**—A combination of fruits makes an attractive pack in a syrup made from two cups sugar and one and one-half cups water. It is a convenient product to have to serve either as a fruit cocktail, salad or dessert. Any light coloured fruits will make a pleasant mixture:

1. Green gage plums, pears and gooseberries.

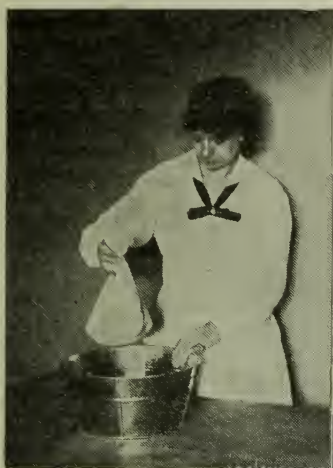
2. Peaches, pears and cherries.

Very often fruits such as berries are not included in these combinations because they would discolour fruits of lighter colour and would have the tendency to lose their form.



*Fig. 4.*

*Cold dip.*



*Fig. 5.*

*Packing the blanched product in the hot sterilized jar taking each sterilized jar out of the canner as needed*



*Fig. 6.*

*Add half teaspoon of salt to each pint jar and fill jar to within quarter of an inch of the top*



**PEACHES—METHOD I**—Select firm peaches, wipe and put in boiling water, allowing them to stay just long enough to loosen skins; cold dip; remove skins and either cook fruit at once that it may not discolour or drop into cold water; cut in halves or leave whole, as desired, and pack in sterile jars. Fill jar to overflowing with boiling syrup, using 1 cup sugar to 1 cup water; half seal and sterilize 16 minutes.

**PEACHES—METHOD II**—Prepare peaches as in Method I; make a syrup with 1 cup sugar and 1 cup water. When it boils add enough peaches to cover the bottom of the saucepan and cook *slowly* until tender. Place carefully in hot sterile jars. Fill to overflowing with syrup and seal quickly. Some peach pits should be put in jars for flavour.

**PEACHES—METHOD III**—Select very firm and perfect peaches; wipe and just cut the skin all round; drop into boiling syrup (use 1 cup sugar to 1 cup boiling water) and cook *slowly* with the skins on, until tender. Be careful they do not boil hard. Pack whole in hot sterile jars and seal as in Method II. This is said to preserve the natural flavour and the bloom of the peach. The skin is very easily removed when jar is opened.

**PEARS—METHOD I**—Pare, cut in halves or quarters and remove the core; put at once into cold water to prevent discolouring. Pack in sterile jars; add boiling syrup (1 cup sugar to 2 cups boiling water). Fill to overflowing and sterilize 20 minutes. Flavour may be varied by adding to each pint jar  $\frac{1}{4}$  lemon (cut fine) and  $\frac{1}{2}$  tablespoon preserved ginger (sliced fine) or a small piece of ginger root.

**PEARS—METHOD II**—Prepare fruit as in Method I; make a syrup of 1 cup sugar to 2 cups boiling water. Add fruit to syrup and also  $\frac{1}{4}$  lemon (sliced fine)  $\frac{1}{2}$  tablespoon preserved ginger (cut fine) or a small piece of ginger root; cook *slowly*, watching carefully, until tender. Place each piece separately in hot sterile jars with a fork; fill to overflowing with boiling syrup and seal.

**PLUMS—METHOD I**—The green-gage, yellow egg and Lombard are the varieties of plums used for canning. Only sound, uniform fruit should be selected; stem, wash, grade, prick with needle to prevent bursting, pack as firmly as possible without crushing, cover with a syrup made from two cups sugar to two cups water and sterilize twenty minutes.

**PLUMS—METHOD II**—Cook in syrup (using 1 cup sugar to 1 cup boiling water) in saucepan until tender, then pack in sterile jars and seal tightly.

**RASPBERRIES—METHOD I**—Pick over and wash fruit. Pack in sterilized jars as closely as possible without crushing. Fill to overflowing with syrup made with one cup of sugar and two cups of water. Sterilize sixteen minutes.

**RASPBERRIES—METHOD II**—Raspberries are best done by the Raw Canning Method described on page 00 of this bulletin.

**STRAWBERRIES**—Wash carefully, pack in sterilized jars, cover with boiling syrup to overflowing, using syrup made with one cup sugar and one cup water. Sterilize sixteen minutes.

## VEGETABLES

**BEANS—METHOD I**—Wash, string and remove ends of beans. Cut in  $\frac{1}{2}$  inch pieces or leave whole; blanch 5 minutes; cold dip and pack closely in hot sterilized jars. Add 1 teaspoon salt to each quart jar. Cover with boiling water to overflowing, adjust rubbers and stops and sterilize 2 hours. Young beans may be packed whole.

**BEANS—METHOD II**—2 cups boiling water,  $\frac{1}{2}$  cup salt, 9 cups beans.

Wash, string and remove ends of beans; cut in  $\frac{1}{2}$  inch pieces. Boil salt and boiling water for 10 minutes; add beans and boil 20 minutes. Pack in hot sterile jars, fill to overflowing with liquid or boiling water and seal at once.



*Fig. 7.*  
*The half sealed jar*  
*ready for the boiler.*

*Fig. 8.*  
*Sealing jars after*  
*removing from the*  
*boiler.*



*Fig. 9.*  
*Simple home canner.*  
*Wooden false bottom for*  
*wash boiler.*

*Fig. 10.*  
*One type of steam*  
*pressure canner.*





**BEETS**—Wash beets thoroughly, leaving on roots and one or two inches of stem to prevent loss of colour. Blanch 15 minutes in water that is kept boiling, or steam if possible. Cold dip and remove skins, roots and stems. Pack closely in sterilized jars. Add one teaspoon of salt, one tablespoon vinegar and one teaspoon sugar to each quart jar. Fill jar to overflowing with boiling water. Adjust rubbers and covers. Sterilize one hour.

**CARROTS**—Wash and scrub carrots. Blanch five minutes in boiling water. Cold dip, cut off roots and pack upright in jars as closely as possible. Add one teaspoon of salt to each quart jar. Fill jar to overflowing with boiling water. Adjust rubbers and covers. Sterilize two hours.

**CAULIFLOWER**—Cut flowered portion into pieces small enough to be easily packed in jars. Place in water slightly salted, for one hour. Blanch three minutes, then cold dip. Pack in sterilized jars. Add one teaspoon salt to each quart jar. Fill jar to overflowing with boiling water. Adjust rubbers and covers. Sterilize one hour.

**CORN**—Blanch the corn on the cob five minutes. Cold dip for one minute. Cut off the kernels, pack and press firmly into sterilized jars; add boiling water so that the corn juice may fill all spaces to within  $\frac{1}{2}$  inch of the top as corn swells during sterilization. Add one teaspoon of salt and 1 tablespoon sugar to each quart jar. Adjust rubbers and covers and partly seal. Sterilize three hours.

**GREENS, (Spinach, Beet Tops, etc.)**—Choose young leaves and wash carefully. Blanch 20 to 30 minutes in a steamer or plunge in boiling water 3 minutes, then cold dip. Pack tightly in sterilized jars. Add one teaspoon of salt to each quart jar. Fill jar with boiling water to overflowing. Adjust rubbers and covers. Partly seal. Sterilize two hours.

**PEAS**—It is of the greatest importance that peas for canning be young. Blanch, cold dip and pack one jar at a time. Wash and shell, blanch five minutes, then cold dip. Pack in sterilized jars. Add one teaspoon of salt and 1 teaspoon sugar to each quart jar, and fill with boiling water to overflowing. Adjust rubbers and tops. Partly seal. Sterilize three hours. A leaf of spinach on top of each jar before adding boiling water will help keep the bright green colour.

**TOMATOES—METHOD I**—Choose medium sized, firm, ripe tomatoes. Wash and scald for two minutes in boiling water. Place in cold water. Remove skins and core without cutting into seed cells. Pack whole in jars. Add one teaspoon of salt to each quart jar. Fill the spaces in the jar with boiling water or tomato juice (made by stewing large or inferior tomatoes about ten minutes and pressing through fine sieve). Adjust rubbers and covers. Partly seal. Sterilize 33 minutes.

**TOMATOES—METHOD II**—Tomatoes may be packed closely in hot sterile jars, covered with water which has been boiled and cooled, and steamed 20 minutes; then filled to overflowing with boiling water and sealed; or they may be packed closely, without crushing, in hot sterile jars, steamed 20 minutes, then filled to overflowing with boiling water and sterilized 20 minutes longer.

**TOMATOES—METHOD III**—Peel tomatoes, cut into pieces; heat slowly to boiling point; cook until very soft. Skim and add 1 teaspoon salt to each pint jar; seal in hot sterile jars. For convenience in making soups and sauces, tomatoes cooked in this way may be strained, re-heated to boiling point and sealed in hot sterile jars.

**SWEET PEPPERS**—Cut around the stem of each pepper and remove the stem and all of the seeds; wash the peppers, pour in boiling water to cover and boil 2 minutes; drain, rinse in cold water and drain again, then pack closely in hot sterile jars. Fill to overflowing with boiling water, adjust rubber and cover; sterilize 10 minutes in hot water bath. Test the peppers with a knitting needle, and, if tender, fill the jar to overflowing with boiling water and sterilize 10 minutes longer. Keep the jars in a cool, dry place.



**CANNING CORN ON THE COB**—Can the corn the same day as it is picked. Remove the husks and silk and grade for size. Blanch on the cob in boiling water for 15 minutes; cold dip. Pack in half gallon jars, alternating the butts and tips. Add 2 tablespoons salt and 2 tablespoons sugar to each jar and fill to overflowing with boiling water. Place rubbers and tops in position and partially seal. Sterilize in hot water bath 3 hours.

**CANNED TOMATOES FOR SALADS**—Sterilize the jars; blanch, cold dip. Peel and take the hard centres out of the tomatoes without cutting into the seeds. Use underripe tomatoes, very firm and free from blemishes; pack tightly and firmly, but without bruising, in hot sterilized jars and pour on boiling brine made in the following way:—"Boil  $\frac{1}{2}$  cup salt,  $\frac{1}{2}$  cup vinegar and 4 cups water. Boil well and strain through cheese cloth, then, bring to the boil again." Adjust sterilized rubbers, take out the air, fill the jars to overflowing with boiling brine and seal at once. Use only the most perfect tomatoes. Tomatoes canned in this way are firm enough to use for salads.

## PRESERVES AND CONSERVES

**APPLE BUTTER**—One bushel apples, eight quarts sweet cider. Cover and boil until tender. Rub the pulp through a strainer and cook thirty minutes longer, then measure. For each gallon add eight cupfuls sugar, eight teaspoons ground cloves, eight teaspoons ground cinnamon. Stir and boil twenty minutes longer. Fill into jars and seal with paraffin.

**APPLE SAUCE**—Pare, core and cook soft in an open kettle any apples suitable for apple sauce. Sweeten to taste while cooking. If you wish to put away for future use place in sterilized jars and seal as you would any other fruit prepared by the open kettle method. This will keep as long as any other canned fruit, but care must be taken to see that there is no decay on any of the fruit when ready for the kettle, and it must be thoroughly cooked. Apple sauce can be prepared in this way by any housewife as a matter of economy of time and fuel. When several jars of other fruit become emptied fill them with apple sauce. Apples that have not good keeping qualities may be thus used.

**CITRON PRESERVE**—Two pounds citron, 1 to 2 pounds sugar, two cups water, one lemon, and small piece of ginger root to flavour,  $\frac{1}{2}$  cup raisins. Wash the citron, cut in half and remove the seeds, then cut into eighths. Put into a weak brine overnight, then drain and cover with clear, cold water four or five hours. Remove skin, drain and cook until clear in the syrup to which the lemon, ginger-root and raisins have been added. Fill jars and seal as you would any fruit cooked by the open kettle method.

### MEDLEY FRUIT CONSERVE—

2 lbs. peaches.	$\frac{1}{2}$ lb. apples.
2 lbs. quinces.	3 lemons.
$1\frac{1}{2}$ lbs. pears.	$4\frac{1}{2}$ lbs. sugar.

Wash and prepare fruit. Pass through food chopper and weigh. To each pound of fruit allow three-quarters pound sugar. Put fruit and sugar in alternate layers in a bowl and let stand overnight. Next morning place in a preserving kettle with the pulp of lemons and one-half the rind sliced in thin strips. Boil until mixture becomes very thick. One cupful of scalded nuts (chopped) may be added, if desired, five minutes before removing from fire. Pack into sterilized jars and seal at once.

**PEAR GINGER**—Peel, core and cut into slices pears not too ripe. To four pounds pears use four pounds sugar and a half cup of water. Add juice of two lemons and rind cut thin. Break one ounce of ginger root into small pieces; add and simmer all until thick as marmalade.

**PUMPKIN CHIPS—**

12 lbs pumpkin.

2 lemons or 1 lemon and 1 orange.

1 lb. green ginger.

Sugar.

Cut the fruit into strips one inch square and one-eighth inch thick. Prepare ginger by paring and slicing thinly and boiling one hour in a syrup of equal parts sugar and water. Slice lemons as for marmalade. Put all in a preserving kettle and let stand twenty-four hours, after adding an equal weight of sugar. Boil about one and one-half hours, or until fruit is transparent, and can.

**APPLE RELISH—**

6 lbs. dried apples (leave skins on).

 $\frac{1}{2}$  lb. pecans or walnuts.

3 lbs. sugar.

1 lb. raisins (cut in pieces).

2 oranges.

Core and dice the apples, leaving the skins on; add the grated orange rind and juice, sugar and raisins. Cook slowly for one hour adding the nuts 5 minutes before removing from fire.

**APPLE SAUCE (Canned without sugar)**—Wash and quarter the apples, removing any bruises or blemishes, *but do not core or peel*; add just enough cold water to prevent apples burning and cook until the apples are very soft; press through a strainer; boil apple pulp 20 minutes; put away in hot sterilized jars. These will keep indefinitely and may be seasoned and flavoured as desired when using.

**GREEN TOMATO MINCEMEAT**—Wash and stem green tomatoes; chop fine. Measure 3 quarts. After being chopped, drain liquid from them and add 4 quarts water. Boil gently for 1 hour. Let stand over night; drain and add:—

1 quart chopped apples.

 $\frac{1}{2}$  lb. suet.2 $\frac{1}{2}$  lb. brown sugar.

1 lb. raisins.

1 cup vinegar.

 $\frac{1}{2}$  lb. mixed peel.

Salt to flavour.

Mix well. Boil slowly two hours then add:—

1 tablespoon cinnamon.

1 tablespoon cloves.

1 tablespoon nutmeg.

**YELLOW TOMATO PRESERVES—**

4 lbs. fruit.

 $\frac{1}{4}$  ounce of ginger. $\frac{1}{2}$  ounce cinnamon. $\frac{1}{2}$  lemon.

} or {

4 lbs. sugar.

6 ounces ginger.

6 lemons (sliced thin).

Wipe the tomatoes, cover with boiling water and let stand until the skins may be easily removed. Add sugar and cover; let stand over night. In the morning, pour the syrup off the tomatoes and boil it until it is quite thick, then add the tomatoes, ginger and lemons or ginger, cinnamon and lemon. Cook very *slowly* until the tomatoes look clear; pack into hot sterile jars and seal at once.

**PLUM CONSERVE—**

1 large basket plums.

Juice and grated rind of 3 oranges.

 $\frac{2}{3}$  their weight in sugar. $\frac{3}{4}$  lb. shelled almonds.

Pit the plums, add sugar, grated orange rind and juice and let stand over night, if possible. Boil slowly 45 minutes, stirring frequently. Add almonds, blanched and cut lengthwise in pieces, and boil slowly 10 minutes longer; turn into hot sterile glasses, seal, label and put away. Serve as marmalade or as a relish.

**GRAPE JAM**—Pick over, wash and remove from stems, weigh. Press pulp from skins, reserving skins. Heat the pulp gradually and cook until it will separate from

the seeds. Press through a strainer to remove seeds. Add skins and sugar—allowing  $\frac{3}{4}$  lb. sugar to 1 lb. fruit. Cook over a moderate heat until thick—about 15 minutes. Pour into jars and seal.

#### GRAPE CONSERVE—METHOD I—

- |                                      |                                   |
|--------------------------------------|-----------------------------------|
| 1 peck grapes.                       | 2 cups raisins.                   |
| $\frac{3}{4}$ their weight in sugar. | 1 orange (juice and grated rind). |
| 2 cups chopped walnuts.              | 2 lemons (juice and grated rind). |

Wash grapes and remove them from the stems; separate the skins from the pulp and cook the pulp until the seeds separate. Rub through a sieve; add the sugar to the grape pulp, then add the chopped nuts and grape skins, and the grated rind and juice of the lemons and orange. Mix well and let stand over night. In the morning cook *slowly* until thick, stirring very frequently. Put in hot sterile glasses.

#### GRAPE CONSERVE—METHOD II—

- |   |                                   |
|---|-----------------------------------|
| 7 lbs. grapes.                            | 2 cups raisins.                   |
| $\frac{3}{4}$ their weight in sugar.      | 3 lemons (juice and grated rind). |
| $1\frac{1}{2}$ to 2 cups chopped walnuts. |                                   |

Wash grapes, remove them from stems and separate the skins from the pulp. Cook the pulp until the seeds separate and rub through a sieve. Add the sugar to the grape pulp, then add the chopped nuts, grape skins, raisins, grated rind and juice of lemons; let stand over night. In the morning cook *slowly* until thick, stirring very frequently. Put in hot sterile glasses.

#### STRAWBERRY CONSERVE—

- |                                      |                                    |
|--------------------------------------|------------------------------------|
| 5 quarts strawberries.               | 3 oranges (juice and grated rind). |
| $\frac{3}{4}$ their weight in sugar. | $\frac{3}{4}$ lb. shelled almonds. |

Wash and hull the strawberries; add the sugar, grated rind and juice of the oranges; mix well and let stand over night, if possible. Cook *slowly* 45 minutes or until thick, stirring very frequently to prevent sticking. Ten minutes before removing from the fire add the almonds (blanched and cut lengthwise in pieces). Turn into hot sterile glasses; seal, label and put away. Serve as marmalade or as a relish.

#### RHUBARB CONSERVE—

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| 4 large cups rhubarb.               | 1 cup seedless raisins.            |
| $2\frac{1}{2}$ cups brown sugar.    | Juice and grated rind of 1 orange. |
| $\frac{1}{2}$ teaspoon baking soda. |                                    |

Wash rhubarb thoroughly and cut in  $\frac{1}{2}$  inch pieces; *do not peel*. Place rhubarb, sugar, soda, raisins and grated orange rind and juice in kettle. Let stand over night, stirring occasionally. Boil slowly 45 minutes, being careful when stirring not to break the rhubarb. Put in sterile jars and seal. This is very delicious as a marmalade or as a relish with meats.

#### CRANBERRY JELLY—

- |                     |                   |
|---------------------|-------------------|
| 4 cups cranberries. | 1 cup cold water. |
| 2 cups sugar.       |                   |

Pick and wash the cranberries; cook them with the water until the skins burst; press through a strainer. Add the sugar to the pulp and stir until it is dissolved; cook 5 minutes or until it jells. Pour into moulds or glasses which have been wet with cold water and set away to cool.

**CRANBERRY CONSERVE**—Cook 6 to 8 cups of cranberries in barely enough water to float them. When all the berries are broken and the fruit is cooked to a mush, rub it through a sieve; measure pulp and add  $\frac{1}{2}$  to  $\frac{3}{4}$  the amount of sugar, the juice and grated rind of 3 oranges,  $\frac{3}{4}$  cup of seeded raisins and  $\frac{1}{4}$  cup seedless raisins. Boil conserve very *slowly* until thick, stirring frequently as it will stick. When thick, pour into hot sterile glasses.

**PEACH AND ORANGE MARMALADE—**

15 large peaches.

6 cups sugar.

4 oranges.

Put the fruit through a mincer (using a finer knife for the oranges in order to cut the rind fine); then add the sugar and boil 20 minutes.

**PEACH CONSERVE—METHOD I—**

24 large peaches.

3½ lbs. sugar.

1½ cups seedless raisins.

2 oranges (juice and grated rind).

2 lemons (juice and grated rind).

Peel and slice the peaches; add the sugar, raisins, juice and grated rind of the lemons and oranges and let stand over night. In the morning cook *slowly* until thick; put in hot sterile glasses.

**PEACH CONSERVE—METHOD II—**

24 large peaches.

3½ lbs. sugar.

3 oranges (juice and grated rind).

1 lemon (juice and grated rind).

¼ lb. shelled almonds (blanched and cut lengthwise in pieces).

Peel and slice the peaches; add the sugar, juice and grated rind of the lemons and oranges; mix well and let stand over night. In the morning, cook slowly until thick. Ten minutes before removing from the fire add the almonds; put in hot sterile glasses.

**PEACH CONSERVE—METHOD III—**

24 large peaches.

3½ lbs. sugar.

2 oranges (juice and grated rind).

2 lemons (juice and grated rind).

½ cup seedless raisins.

½ lb. shelled almonds (blanched and cut lengthwise in pieces).

Peel and slice the peaches; add the sugar, raisins, juice and grated rind of oranges and lemons; mix well and let stand over night. In the morning cook *slowly* until thick. Ten minutes before removing from fire, add the almonds. Put away in hot sterile glasses.

**CARROT MARMALADE—METHOD I—**

5 cups grated carrots.

3 cups sugar.

2 lemons (juice and grated rind).

2 oranges (juice and grated rind).

Wash and scrape carrots; grate carrots and add sugar, grated lemon and orange rind and juice; let stand over night. In the morning boil *slowly*, stirring frequently, until thick. Put away in sterile glasses.

**CARROT MARMALADE—METHOD II—**

5 cups grated carrots.

½ teaspoon cinnamon.

3 cups sugar.

½ teaspoon cloves.

2 lemons (grated rind and juice).

½ teaspoon allspice.

Wash, scrape and grate the carrots; add sugar, grated lemon rind and juice; let stand over night. Add the spices in the morning and boil *slowly*, stirring frequently until thick. Put away in hot sterile glasses.

**APRICOT CONSERVE—**

5 quarts apricots.

3 lemons (juice and grated rind).

¾ their weight in sugar.

1 orange (juice and grated rind).

½ lb. shelled almonds.

Wash the apricots and remove the pits; add the sugar, juice and grated rind of the lemons and orange; let stand over night. In the morning boil *slowly* 45 minutes or until quite thick, stirring very frequently. Add almonds (blanched and cut lengthwise in pieces) and boil 10 minutes longer. Turn into hot sterile glasses and seal.



## PICKLES AND RELISHES

**PICKLED CARROTS**—Wash thoroughly, blanch and cold dip, remove skins. Pack in jars whole or in slices. Prepare same as for canning, adding to each pint jar  $\frac{1}{2}$  cup vinegar, 3 tablespoons brown sugar, 1 teaspoon whole spice and 1 teaspoon salt. This may be used for beets also.

### SWEET PICKLED PEACHES OR PEARS—

$\frac{1}{2}$ peck peaches.	1 pint vinegar.
2 lbs. brown sugar.	1 oz. stick cinnamon.
Whole cloves.	

Boil sugar, vinegar and cinnamon 20 minutes. Dip peaches quickly in boiling water, then rub off the fur with a towel, stick each peach with 4 cloves. Put into syrup and cook until soft, using  $\frac{1}{2}$  the peaches at a time.

### SPICED PLUMS—

7 lbs. plums.	Allspice and cloves to taste.
3 lbs. brown sugar.	1 pint vinegar.
Prepare the same as pickled peaches.	

**BEANS IN SALT**—Snip and blanch the beans. Pack in crock in layers beginning with a layer of salt, then a layer of beans until the crock is filled. Finish with a layer of salt. Put a plate on top and weight, and they will make their own brine.

### CHILI SAUCE—

18 ripe tomatoes.	1 tablespoon mustard.
2 or 3 red peppers.	1 tablespoon cinnamon.
2 tablespoons salt.	1 tablespoon celery seed.
2 tablespoons ginger.	1 quart vinegar.
1 tablespoon allspice.	$\frac{1}{2}$ cup sugar.
1 tablespoon cloves.	2 onions.

Remove skins from tomatoes and cut in pieces. Cut up peppers very finely and onions. Add spices and vinegar and boil for about two hours, until mixture is right consistency, being careful it does not scorch.

**CUCUMBER PICKLES**—Soak cucumbers in brine, made of one cup of salt to two quarts of water, for a day and night. Remove from brine, rinse in cold water and drain. Cover with vinegar, and one tablespoon brown sugar, some stick cinnamon and cloves to every quart of vinegar used; bring to a boil and pack in jars. For sweet pickles use one cup of sugar to one quart of vinegar.

### GREEN TOMATO PICKLES—

4 quarts green tomatoes.	4 small onions.
4 green peppers.	

Slice the tomatoes and onions, sprinkle with  $\frac{1}{2}$  cup of salt and leave over night in a crock. The next morning drain off the brine. Put in a preserving kettle 1 quart of vinegar, 1 level teaspoon each of black pepper, mustard-seed, celery seed, cloves, allspice and cinnamon, and  $\frac{3}{4}$  cup of sugar. Bring to a boil and add the prepared tomatoes, onions and peppers. Cook slowly for thirty minutes. Fill jars and seal.

### SPICED GRAPES—

7 lbs. grapes.	1 tablespoon cloves.
4 lbs. sugar.	1 tablespoon cinnamon.
1 pint vinegar.	1 teaspoon allspice.

Prepare fruit as for grape jam. Add seasonings and boil slowly until thick—about 2 hours.

**CRAB APPLE RELISH—**

- |   |                           |
|---|---------------------------|
| 6 lbs. crab apples (cored and chopped). |                           |
| 1 lb. raisins (seeded and chopped).     | 6 lbs. sugar.             |
| 2 oranges (grated rind and juice).      | 1 pt. cider vinegar.      |
| 1 teaspoon cinnamon.                    | 1 teaspoon ground cloves. |

Cook crabs, raisins and vinegar till soft, add sugar and spices and cook till thick. About 10 minutes before removing from the heat add the orange rind and juice.

**GREEN TOMATO SAUCE—**

- |                              |                              |
|------------------------------|------------------------------|
| 2 doz. large tomatoes.       | 2 lbs. brown sugar.          |
| 1½ doz. apples.              | 2 ounces mustard.            |
| ¼ pound salt.                | 2 tablespoons ground ginger. |
| 4 large green sweet peppers. | 2 pints vinegar              |
| 1 red pepper.                | 6 large onions.              |

Boil 1½ hours.

**MUSTARD PICKLES (Winter Salad)—**

- |                        |                           |
|------------------------|---------------------------|
| 6 or 8 green tomatoes. | 2 heads celery.           |
| 1 head cabbage.        | 2 red peppers (cut fine). |
| 6 large onions.        |                           |

Put in preserving kettle and nearly cover with white wine vinegar. Boil 15 minutes and add 2 pounds of sugar, 2 tablespoons salt, 1 cup flour, 1 teaspoon tumeric, 2 tablespoons mustard mixed with a small quantity of water. Boil for ten minutes and bottle.

**PICKLED ONIONS**—Peel, wash and put onions in brine, using two cups of salt to two quarts of water. Let stand two days, pour off brine, cover with fresh brine and let stand two days longer. Remove from brine, wash and pack in jars, cover with hot vinegar to which whole cloves, cinnamon and allspice have been added.

**RIPE CUCUMBER PICKLE**—Cut cucumbers in halves lengthwise. Cover with alum water, allowing 2 teaspoons powdered alum to each quart of water. Heat gradually to boiling point, then let stand on back of range two hours. Remove from alum water and chill in ice-water. Make syrup by boiling five minutes two pounds of sugar, one pint of vinegar with two tablespoons each of whole cloves and a stick of cinnamon tied in a piece of muslin. Add cucumbers and cook ten minutes. Remove cucumbers to a stone jar, and pour over the syrup. Scald syrup three successive mornings and return to cucumbers.

**SAUER KRAUT**—If you have a surplus of cabbage which you are unable to keep fresh, make into sauer kraut. Cut the cabbage into shreds, do not chop. Put a layer of cabbage about three inches deep into tank or vessel having straight sides. Crockery ware or cypress or white pine casks are good for the purpose. Sprinkle over the first layer of shredded cabbage the best dairy salt. The proper proportion is two and one-half pounds salt for each 100 pounds of cabbage. Repeat this until the cask is full and heaped up. Have a cover fitted to inside of cask. Put this over the cabbage and weight it down with rocks. In ordinary temperature the kraut will cure in from sixteen to eighteen days.

**SWEET PICKLED CARROTS**—Boil young, tender carrots until three-quarters done. Scrape, cut in thin slices and pour a boiling spiced syrup over them. The syrup is made by boiling together one quart of vinegar, 4 cups brown sugar, one tablespoonful of cinnamon, cloves, mace and allspice. Allow to stand over night in this syrup, next morning boil for five minutes. Pack in jars and seal tightly.

**UNRIPE CUCUMBER PICKLE (Gherkins)**—Wipe four quarts small unripe cucumbers. Put in a stone jar and add 1 cup salt dissolved in 2 quarts of boiling water, let stand three days. Drain cucumbers from brine, bring brine to boiling point,

pour over cucumbers, and again let stand three days; repeat. Drain, wipe cucumbers and pour over one gallon boiling water in which one tablespoon of alum has been dissolved. Let stand six hours, then drain from alum water; rinse thoroughly. Cook cucumbers ten minutes, a few at a time, in one-quarter of the following mixture heated to the boiling point and boil ten minutes:—

- |                    |                         |
|--------------------|-------------------------|
| 1 gallon vinegar.  | 2 tablespoons allspice. |
| 4 red peppers.     | 2 tablespoons cloves.   |
| 2 sticks cinnamon. |                         |

Strain remaining liquor over pickles which have been put in a stone jar.

### UNCOOKED VEGETABLE SALAD PICKLE—

- |  |                         |
|--|-------------------------|
| 1 peck ripe tomatoes.                        | 4 tablespoons cinnamon. |
| 4 large red peppers.                         | 2 tablespoons cloves.   |
| 12 onions (chopped by hand<br>not too fine). | 2 teaspoons pepper.     |
| 2 cups sugar.                                | 1 teaspoon red peppers. |
| 2 cups salt.                                 | 4 stalks celery.        |
|  | 2 quarts vinegar.       |

Put salt over chopped vegetables and let stand over night. *Drain extra well.* Then pour over the vinegar and other ingredients; mix well and bottle. It is most important to drain extra well.

### TOMATO AND PEACH CHUTNEY—

- |   |                                 |
|---|---------------------------------|
| $\frac{1}{2}$ peck peaches.                               | $\frac{1}{2}$ peck tomatoes.    |
| 1 quart small white onions<br>(put through food chopper). | $\frac{1}{2}$ oz. paprika.      |
| 1 tablespoon ground mace.                                 | $\frac{1}{2}$ oz. black pepper. |
| 1 tablespoon cloves.                                      | 2 cups brown sugar.             |
| 1 tablespoon cinnamon.                                    | 3 cups cider vinegar.           |

Mix well; let stand over night. In the morning cook *slowly*, stirring frequently until it is the right consistency.

### CHILI SAUCE—

- |                            |                           |
|----------------------------|---------------------------|
| 12 large ripe tomatoes.    | 1 tablespoon cloves.      |
| 2 large onions.            | 1 tablespoon cinnamon.    |
| 4 green peppers.           | 1 tablespoon allspice.    |
| 2 tablespoons salt.        | 1 teaspoon grated nutmeg. |
| 4 tablespoons brown sugar. | 1 pint vinegar.           |

Peel the tomatoes and onions. Cut tomatoes in small pieces and chop the onions and peppers fine. Add the remaining ingredients, heat gradually to boiling point and cook *slowly* 2½ to 3 hours; stir frequently. If the vinegar is strong dilute it with water.

### TOMATO JAM—

- |                               |                                      |
|-------------------------------|--------------------------------------|
| 1 lb. good firm red tomatoes. | $\frac{1}{2}$ lb. brown sugar.       |
| 1 teaspoon ground cloves.     | 2 teaspoons allspice.                |
| Salt to taste.                | $\frac{1}{2}$ teaspoon white pepper. |
| 1½ cups cider vinegar.        |                                      |

Peel and slice tomatoes; simmer for  $\frac{1}{2}$  hour then add remaining ingredients and simmer for 1½ hours. Put in sterilized jars and seal. This is very delicious with meat and fowl.

## OTHER METHODS OF CANNING

**"RAW CANNING" OF SMALL FRUITS**--Small fruits like raspberries can be sterilized so as to retain their natural shape, colour and flavour without actual cooking.

Pack fruit in hot sterilized jars. Fill jars with boiling syrup (see syrup table) and seal tightly. Place jars in a wash tub, or similar vessel, and fill it with enough boiling water to reach to the top of the jars. Place a blanket over the tub and leave till cold. If using screw top jars, tighten occasionally as the water cools. Invert to test for leaks.

Instead of the tub of boiling water the fireless cooker may be used. Heat soap stones, place them in fireless cooker, then put in packed and sealed jars, seal up cooker and leave till cold. Remove jars and test for leaks.

**ACID FRUITS CANNED WITHOUT HEAT OR SUGAR**--Inquiries have been made with regard to the success of this method. The following acid fruits are those generally used: rhubarb, gooseberries, sour cherries, plums and currants.

The method employed is as follows, but at present it has not been tried out sufficiently to be endorsed:--

Fresh fruit, free from blemishes, is placed in the jars. The jars are then placed in a tub or receptacle deep enough so that when it is filled with water the jars will be at least four inches below the surface. The tub is then placed under a tap or source of running water and the water is allowed to run until all the air bubbles have ceased to appear and the impurities are washed away. This usually occupies from five to ten minutes. The jars are then sealed under water, wiped dry, turned upside down and allowed to remain in that position for 24 hours; if dry after that period the bottle is proved to be air tight; if not, the process must be repeated. The water must be pure.

### THE QUESTION OF RUBBERS

Careful attention to detail is sure to bring success in canning. People in all parts of the country have had success, but *not all* had equal success. Perhaps the chief reason may be summed up in this word "*Rubbers.*" Rubbers from last year's jars may be used, but you are taking chances if you use them with some things. You cannot *Seal the Jars Perfectly* with a rubber which has been used.

If, therefore, you fail in this simple matter of detail, but which also happens to be one of fundamental importance, *Don't Blame the Method, but Yourself.*

### COOKING FRUIT WHOLE IN JARS

Clean and prepare fruit or vegetables and pack neatly and closely into hot sterilized jars, arranging it to look well. Adjust a new sterilized rubber and fill the jars to overflowing with hot syrup or boiling water.

### BAKING OR OVEN CANNING

Set the jars, prepared as explained above, in a pan containing an inch or two of hot water. Set the pan with the jars in a hot oven and bake 20 to 30 minutes, or, until hot all through and bubbles rise in the jars, OR

Set the jars on a pad of asbestos, at least 1 inch thick, in a hot oven and bake 20 to 30 minutes or until bubbles rise in the jars.

### STEAMING

Set the jars, prepared as explained above, on a rack in a boiler containing three or more inches of hot water and steam about 20 minutes. When bubbles rise to the top of the jars and the contents of the jars are hot all through, remove the jars, fill with hot syrup or hot water to overflowing and seal.



## JAMS AND JELLIES

**JAM**—To make successful jam, have the fruit good and firm and part of it a little under-ripe. Fruit in this condition makes jam of a jelly-like consistency, while soft or over-ripe fruit makes syrupy jam. Wash the fruit carefully, removing any bruised or decayed parts, then put all in a preserving kettle, mashing a few pieces to let the juice escape and prevent fruit from sticking to the bottom of the kettle. Put on stove and bring slowly to a boil. Boil gently until tender. Then add sugar according to taste—usually  $\frac{3}{4}$  lb. sugar to 1 lb. fruit, but in some cases it may be necessary to add 1 lb. sugar to  $\frac{1}{2}$  lb. fruit. Let boil gently until sugar is all dissolved. Bottle at once in sterilized jars.

**JELLY**—Jelly to be successful must be made from fruit containing both pectin and acid. Pectin is a substance which is soluble in hot water. When cooked with sugar and acid, and subsequently cooled it gives the right consistency to jelly. It is plentiful in most fruits which are just ripe or slightly under-ripe. The skin and core of apples contain it and crab apples contain it in even greater degree, as also do green grapes, green gooseberries and wild cherries. A little of the juice extracted from these fruits and added to sweet fruits, which are short of pectin or acid, will produce good results.

**Directions for making jelly**—Wash fruit, remove stems and, if large, cut into pieces.

Put into the saucepan. In the case of juicy fruits they should first be crushed and then have only enough water added to allow the fruit to cook until tender. Less juicy fruits like the apple require more water. Allow to simmer until tender. Strain through a bag of flannel or heavy cotton. Measure out proportion of sugar and heat. Add sugar to juice when it begins to boil. Boil juice slowly about 20 minutes, then add heated sugar. The jelly point is reached when the juice drops as a mass from the side of a spoon, or when two drops run together and fall as one from the spoon. Skim the juice and pour into sterilized jars. When cool pour hot paraffine over the surface and protect with a cover of paper or metal.

**Sugar used**—Currants and under-ripe grapes: 1 cup to 1 cup of juice; berries, crab apples, wild cherries and gooseberries,  $\frac{3}{4}$  of a cup to a cup of juice; peaches, pears, sweet apples, and quinces lack acidity and will need the juice of crab apples; strawberries and cherries lack pectin and will also need it.

## HOME DRYING

The object in evaporation or dehydration is to remove all moisture from the material, so that organisms are not able to grow and multiply. Drying should not be regarded as taking the place of canning, but rather as an important adjunct. It should be done when canning is not practicable, as in the case of small quantities of fruit or vegetables.

### THE ADVANTAGES OF DRYING

1. The finished product has a weight only one-fourth that of the fresh material
2. The dried material may be stored almost indefinitely without danger of deterioration.
3. Dried products may be shipped very easily.
4. They have the special advantage of requiring very little storage room.

### PREPARATION OF MATERIAL

In preparing material for drying, vegetables should first be blanched as for canning, and cut in slices one-quarter of an inch thick. When cut too thin they are difficult to handle; when too thick they do not dry quickly.

It is just as important to use young and tender vegetables for drying as it is for canning. First-class material must be used in order to get first-class results.

### THREE METHODS OF DRYING

1. Sun drying.
2. Drying by artificial heat.
3. Drying by air-blast. (Using an electric fan).

**Sun drying**—Sun drying is the least expensive method, and, when climatic conditions permit, is the most successful. Sun drying requires bright, hot days and a breeze. Once or twice a day the product should be turned and the dry pieces removed.

The product may be spread on sheets of plain paper, pieces of muslin, or a wire screen may be used. Cheesecloth should be tacked to a frame and used as a covering, so that dust and insects may be excluded without interfering with the circulation. The cheesecloth should not rest directly on the food. Care must be taken to remove the trays indoors before sunset and during rain storms.

**Drying by Artificial Heat**—Products may be dried in the oven, on the top of the stove, in trays suspended over the top of the range, or in a commercial or home-made drier. In this way the heat of the stove or the oven is utilized. In using artificial heat the drying should be started at a comparatively low temperature and gradually increased; for this reason it is necessary to use a thermometer. The temperature at which most vegetables should begin is from 110° to 120° Fahrenheit. The temperature may be gradually increased to 145° or 150° Fahrenheit. When the temperature is too high at first, the surface of the vegetable becomes hard, while the inside is still juicy.

**Drying by Air-blast**—This method is perhaps the quickest and cheapest. It consists of allowing a current of air to pass over the product, using an electric fan, either with or without artificial heat.

The disadvantage of this method is that it is very difficult to regulate the drying process and the material is apt to dry out too quickly, a hard crust forming on the outside and thus preventing the moisture in the centre from escaping.

**The Conditions of Products when Sufficiently Dried**—The product should be leathery and pliable; not so dry that it will snap when broken. When the pieces are cut or broken open the cut ends should not show any moisture when pressed between the fingers. If the products become hard when dried they will not resume their original shape when soaked.

After the products are sufficiently dried it is important that they be "conditioned". This means that they must be placed in containers, preferably boxes, and poured from one box to another at least once a day for three or four days to mix thoroughly. If any part of the product is found not to be sufficiently dried it can be returned to the drier for a short time.

**Proper Storage for Dried Products**—Proper storage is absolutely essential. With the present high price of glass jars it is recommended that other containers be used for the storage of dried products. Cans, such as baking powder cans, coffee cans, etc., with tight fitting covers, also strong paper bags and paraffine lined paper boxes may be used successfully.

If a paper bag is used the top should be twisted, doubled over and tied with a string. If the bag is coated with melted paraffin wax the moisture will be kept out.

It is a good plan to use small containers so that it may not be necessary to leave the contents exposed after opening and before using.

The products should be stored in a cool, dry place, well ventilated and protected from rats, mice and insects.

**Preparation of Dried Products for the Table**—The water which has evaporated must be restored. This is done by soaking for a long time, using three to four cups of water to one cup of dried material. Care must be taken that too much water is not used, as the object is to restore the amount which has evaporated. After soaking for several hours, and in some cases over night, the dried products should be cooked in a covered utensil at a low temperature for a long time. They should be cooked in the water in which they were soaked. In serving dried products great care must be taken that they are well seasoned.

## DIRECTIONS FOR DRYING

**BEANS**—Beans must be in perfect condition. Wash carefully and string. Blanch from 5 to 10 minutes, adding  $\frac{1}{2}$  teaspoon soda to each gallon of boiling water; cold dip and remove surface moisture. Spread thinly on trays to dry. Dry slowly, increasing the temperature from 120° Fahrenheit to 145° Fahrenheit.

**CELERY**—Wash carefully and cut in inch pieces, blanch 3 minutes, and cold dip. Remove surface moisture with cheesecloth or towel. Dry slowly, starting at temperature of 110° Fahrenheit and increasing to 140° Fahrenheit.

Celery tips may be dried in the oven and used for soups, seasoning, etc.

**CORN**—Blanch cob for from 5 to 10 minutes to set the milk, adding one teaspoon of salt to each gallon of water. Cold dip and remove surface moisture. With a sharp knife cut off kernels, taking care not to include the chaff. Starting at a temperature of 110° Fahrenheit and raising gradually to 145° Fahrenheit the corn should dry in 4 to 5 hours.

If the corn is to be dried in the sun, it should first be dried in the oven at 110° Fahrenheit for from 15 to 20 minutes, and again, after the sun drying is completed, at a temperature of 145° Fahrenheit for 5 minutes.

**PEAS**—Shell, blanch for from 3 to 5 minutes, cold dip and remove surface moisture. Starting at a temperature of 110° Fahrenheit and increasing slowly to 145° Fahrenheit it takes from 3 to 4 hours for peas to dry.

**ONIONS**—Peel and slice onions into  $\frac{1}{4}$ -inch slices. Blanching is not necessary. Dry for from 2 $\frac{1}{2}$  to 3 hours at a temperature of from 120° to 140° Fahrenheit.

**PUMPKIN**—Cut into  $\frac{1}{2}$ -inch strips and peel, blanch for from 3 to 6 minutes, remove surface moisture and dry slowly 3 to 4 hours at 120° to 150° Fahrenheit.

**SOUP MIXTURE**—Each vegetable should be dried separately and then combined. From 3 to 4 quarts of vegetable soup may be made from 4 ounces of dried soup mixture.

**APPLES**—Peel, core and cut in slices  $\frac{1}{4}$ -inch thick. Dip in a weak salt solution; 1 to 2 tablespoons of salt to 1 gallon of water, to prevent discoloration. Remove surface moisture and dry slowly for from 5 to 8 hours, increasing the temperature, from 120° Fahrenheit to 150° Fahrenheit. Apples should be tough and leathery when dried.

**PARSLEY**—Wash, take off stems and dry in warming oven.

**RHUBARB**—Cut into 1-inch pieces. Blanch 3 minutes and cold dip, remove surface moisture and dry at a temperature of from 120° to 145° Fahrenheit.

**Note:**—The exact length of time for drying cannot be given, as so much depends upon the method used.

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# WINTER STORAGE OF VEGETABLES AND FRUITS

## THE STORAGE ROOM

If you have grown the crops, without doubt you have some sort of a cellar. If you have a cellar you should have a storage room in it. You can make one as follows:—

1. Select a suitable portion of the cellar.
2. Board it off from the rest of the cellar.
3. Cover the boards with felt paper. Do so on both sides of the partition and do a thorough job. Your object is to exclude the artificial heat from the furnace.
4. Provide a false floor for part of this room.
5. Nail a few slats on one of the walls.
6. Build a few bins on one side of the room.
7. Provide a few hooks in the ceiling.
8. Order a load of builders' sand and store it in one of the bins.
9. Provide a few slat boxes and old bags.

The reasons for this advice are given in what follows:—

## CAUTIONS ABOUT STORING

Don't let the frost injure the crops before you take them into the cellar.

Don't bring them in while they are in a moist condition.

Don't cover roots with damp sand if the cellar is hot. They will start to grow if you do. Eat them quickly, can, dry or give away in preference.

Don't let cold winds dry out your potatoes. If you do a bitter taste is the result.

Don't try to store onions, squash or pumpkins in a cool cellar. They will keep better in the attic.

Don't forget to watch your storage room and sort out decayed specimens before the trouble spreads.

Don't forget that a cheap thermometer is a good friend in a storage room.

If it is impossible to provide a special storage place, as suggested, select that part of the cellar farthest removed from the furnace where the greatest amount of air circulation takes place.

## FACTORS IN SUCCESSFUL CELLAR STORAGE

**TEMPERATURE**—The ideal temperature is one ranging from 35° to 40° F. The temperature which drops a few degrees lower will seldom injure the stored crops provided they are stored where rapid changes in temperature are not possible. If the temperature is 32° at night and 40° in the day, for example, more injury will result than if it drops to 32° and remains so for a few days and then gradually rises through several more days to the right temperature.

**HUMIDITY**—Humidity is the second important factor in successful storage. The less moisture there is in the air the quicker stored products will dry out. This results in serious deterioration and shrinkage. The air should be slightly moist. Without a special partition it is difficult to keep the air of the ordinary city cellar, containing a furnace, moist enough. Moulds are due to excessive dampness. Better ventilation will reduce the dampness. Rapid changes of temperature also produce damp conditions.

**SAND, SOIL, ETC., FOR COVERING**—Many of the roots, like carrots and beets, will keep better in cellar storage if covered with sand or dry soil. Builders' sand is ideal. In some cases it is better to have it slightly moist (not wet). If the cellar is very dry, and not too hot, and the roots are stored on a cement floor, it may be found necessary to moisten it occasionally. On earth floors which give off some moisture this would be less necessary. If the earth floor is very damp a slatted floor about two inches from the earth should be provided.



**VENTILATION**—Good ventilation, as suggested, is extremely important, and every means should be adopted to promote the circulation of the cellar air in and around or amongst the stored crops. The large losses which occur every year from insufficient ventilation, especially of the potato crop, are very serious. Even in moderate quantities the saving in the produce would more than offset the cost of installing a very simple ventilation system. This may be provided by means of upright square troughs placed in the heaps, or by nailing slats to the walls so that the air can circulate around the heaps. When root crops are stored in boxes they should be of the crate type, with space between the slats to allow a circulation of air.

## PITTING OUTSIDE

Pitting the roots in specially constructed, but very simply made pits in the field or garden is also successful, and where large quantities of potatoes have been grown it may be used as a useful method of storage for the small householder. It is a method which can be used for surplus produce.

**THE METHOD** is as follows: select a well-drained spot in the garden and in sandy or gravelly soil. Mark off an area five feet wide and any desired length. Dig out the soil from this to a depth of about 8 inches, placing it well back from the edge of the space. In this shallow trench place a layer of straw and on this pack the roots so that they will come to a neat pile about 4 feet high. Different kinds of vegetables may be placed in the same pit, if necessary, but should be separated by a thin partition of straw. Cover the pile with several inches of coarse straw and then on the top invert a "V"-shaped trough, which should protrude from each end of the pit to provide ventilation, then cover the whole heap with about three inches of loose earth. Later on in the fall, about the end of November, either add another covering of straw and another covering of earth, or increase the covering of earth to about 8 inches, or even 10 inches. It may be advisable, in exposed place, to give a third covering of straw and earth. Alternate layers of straw and earth provide better insulation than the solid earth covering.

Full particulars may be found in Exhibition Circular No. 57, issued by the Experimental Farm, Ottawa, obtainable free upon application.

## VEGETABLES (IN DETAIL)

**POTATOES**—1. **CONDITION**—If dug on a fine day and left on the ground for a short time they will be in ideal condition. Brought into the cellar in a wet condition the keeping quality will be impaired, and often serious loss from rotting results from the same cause.

2. **DARKNESS**—Store in a dark part of the room. Light adversely affects quality.

3. **TEMPERATURE**—The ideal temperature is from 33° to 35° F.

4. **VENTILATION**—Place the potatoes on the false floor and against the wall on which you tacked the slats. Large piles of potatoes should have upright ventilators every few feet. Make these by nailing three six-inch boards together to form a "V"-shaped trough.

5. Sort over occasionally for decayed tubers. In the spring break off all sprouts except from those reserved for seed.

**CABBAGE**—Part or complete outside storage for cabbage is the most successful way. They should not be brought into a warm cellar in the early autumn.

**METHOD**—Place in piles in the garden and cover with dry leaves. Early in the winter take in and pile in the bins or on shelves. Sometimes they will keep well if tied in bunches of three and suspended from the ceiling. Another method is to stack and cover with a larger quantity of leaves. Keep in this way until needed. The pitting method is also successful.

**CELERY**—Celery may be kept outside in trenches or inside in boxes with the roots covered with soil. When kept inside it is important to keep the roots moist and the leaves dry. If the foliage is wetted it succumbs to disease. Take up before it is injured by frost. Leave the roots on and place upright in shallow boxes containing several inches of moist sand. Keep in an airy, but dark, part of the room.

In outside storage, trenches are made about the depth of the celery and a foot to sixteen inches wide. The trenches should be made on a side hill or well-drained spot. Stand the plants upwright in the trench and leave until the leaves are touched by the early frost. This reduces their moisture content. Then cover with leaves. Leave one end of the trench open in order to get at the celery as it is required for use. When brought into the house place in cold water to bring out the frost. It will then freshen them.

**BEETS, TURNIPS, CARROTS, PARSNIPS, AND SALSIFY**—These roots may be stored similar to potatoes. They may be kept, however, in better condition by covering with sand. Conditions of the place of storage and of the roots themselves should determine whether to use the sand dry or slightly moist. If they start to shrink, moisten the sand. When boxes are used a little damp sand should be placed in the bottom of the boxes, then alternate layers of vegetables and sand. When piled on the floor a covering with sand is generally sufficient. In drying beets the tops should be twisted off and not cut off with a knife, as this will cause "bleeding," loss of colour and very often decay.

**ONIONS**—Store in the attic. They should be dry and thoroughly well cured outside before they are placed in storage. Dampness causes decay. They will keep well in slat boxes or shallow trays.

**SQUASH, PUMPKIN**—These are more difficult to store. They require a slightly warmer temperature. Placed in barrels or boxes and packed in straw or excelsior and in a part of the cellar near to the furnace they may keep for some time. The should be carefully handled so as to avoid bruising. Sort over frequently for spoiled ones. Others may be placed in the attic as a temperature of about 50° is better for them.

**TOMATOES**—One of the best and most recent methods of ripening green tomatoes in the late autumn is to wrap each fruit in paper and place in a closed box or drawer located in a warm room. Another method is to pull the vine before any signs of injury from frost and suspend from the ceiling of a warm room or the cellar. In some cases, if conditions are suitable, the fruit will go on ripening until Christmas. A dark place is preferable and a temperature of 50° to 65° suitable.

## FRUIT

It is safer and as economical, in most cases, to can or dry fruit. When kept under storage conditions the same general principles apply to it as to vegetables.

**APPLES**—One of the essential points in successful apple storing is to see that the fruit reaches the cold storage, or storage cellar, in the most favourable condition. If this is done the apples will keep for a very much longer period than if placed in storage after they have been left to heat up in piles in the orchard, or have been otherwise injured by improper handling. Only apples of good keeping quality should be selected for winter storage. The fruit should be mature. Apples picked green cannot be recommended for storage purposes. The apples should be cooled immediately they are picked. This helps to prevent skin diseases which are otherwise likely to develop in storage. If the fruit is left to heat up in piles or in barrels in the sun after picking, the diseases are encouraged to start, which afterwards play great havoc amongst the stored apples. The ideal temperature for apples is one between 31° and 33° F. Apples wrapped in paper and placed in boxes, each holding about a bushel, which may be packed one above the other in the storage room can be easily handled and will keep in ideal condition. Barrel storage is also satisfactory.

## TIME TABLE FOR CANNING

	Blanching	Sterilization		
		Hot water Bath	Steam pressure 5 to 10 lbs.	Steam pressure 10 to 15 lbs.
<b>VEGETABLE—</b>	Minutes	Minutes	Minutes	Minutes
Asparagus.....	10 to 15	180	60	40
Beets.....	5	60	60	40
Brussels Sprouts.....	5 to 10	120	60	40
Cabbage.....	5 to 10	120	60	40
Cauliflower.....	3	60	30	20
Carrots.....	5	120	60	40
Corn.....	5 to 10	180	90	60
Greens.....	15	120	60	40
Lima Beans.....	5 to 10	180	60	40
Peas.....	5 to 10	180	60	40
Pumpkin.....	.....	120	60	40
String Beans.....	5 to 10	180	60	40
Squash.....	.....	120	60	40
Tomatoes.....	To loosen skins	22	60	40
Mushrooms.....	5	90	50	30
<b>FRUIT—</b>				
Apples.....	.....	60	8	
Apricots.....	1 to 2	16	10	
Blackberries.....	.....	16	10	
Blueberries.....	.....	16	10	
Cherries.....	.....	20	10	
Currants.....	.....	16	10	
Gooseberries.....	.....	16	10	
Pears.....	1½	30	8	
Peaches.....	To loosen skins	16	10	
Plums.....	.....	20	10	
Quinces.....	1½	20	8	
Raspberries.....	.....	16	10	
Rhubarb.....	1½	20	15	
Strawberries.....	.....	16	10	

## TIME TABLE FOR DRYING

	Blanching	Approximate Drying time	Temperature
<b>VEGETABLE—</b>	Minutes	Hours	
Beets.....	10	3 to 4	115° to 150°
Brussels Sprouts.....	6	3 to 3½	115° to 145°
Cabbage.....	5	3 to 4	115° to 145°
Carrots.....	4 to 8	3	115° to 145°
Cauliflower.....	3 to 6	3 to 4	115° to 140°
Celery.....	3	3 to 4	110° to 140°
Corn.....	5 to 10	3 to 4	110° to 145°
Green Beans.....	5 to 8	3 to 5	120° to 145°
Onions.....		3 to 3½	120° to 140°
Peas.....	5	3 to 4	115° to 145°
Pumpkin.....	3	3 to 4	120° to 150°
Rhubarb.....	3	5 to 7	120° to 145°
<b>FRUIT</b>			
Apples.....		4 to 6	120° to 150°
Berries.....		4 to 5	110° to 145°
Cherries.....		3 to 4	115° to 150°
Peaches.....		4 to 6	125° to 150°
Plums.....		4 to 6	110° to 150°

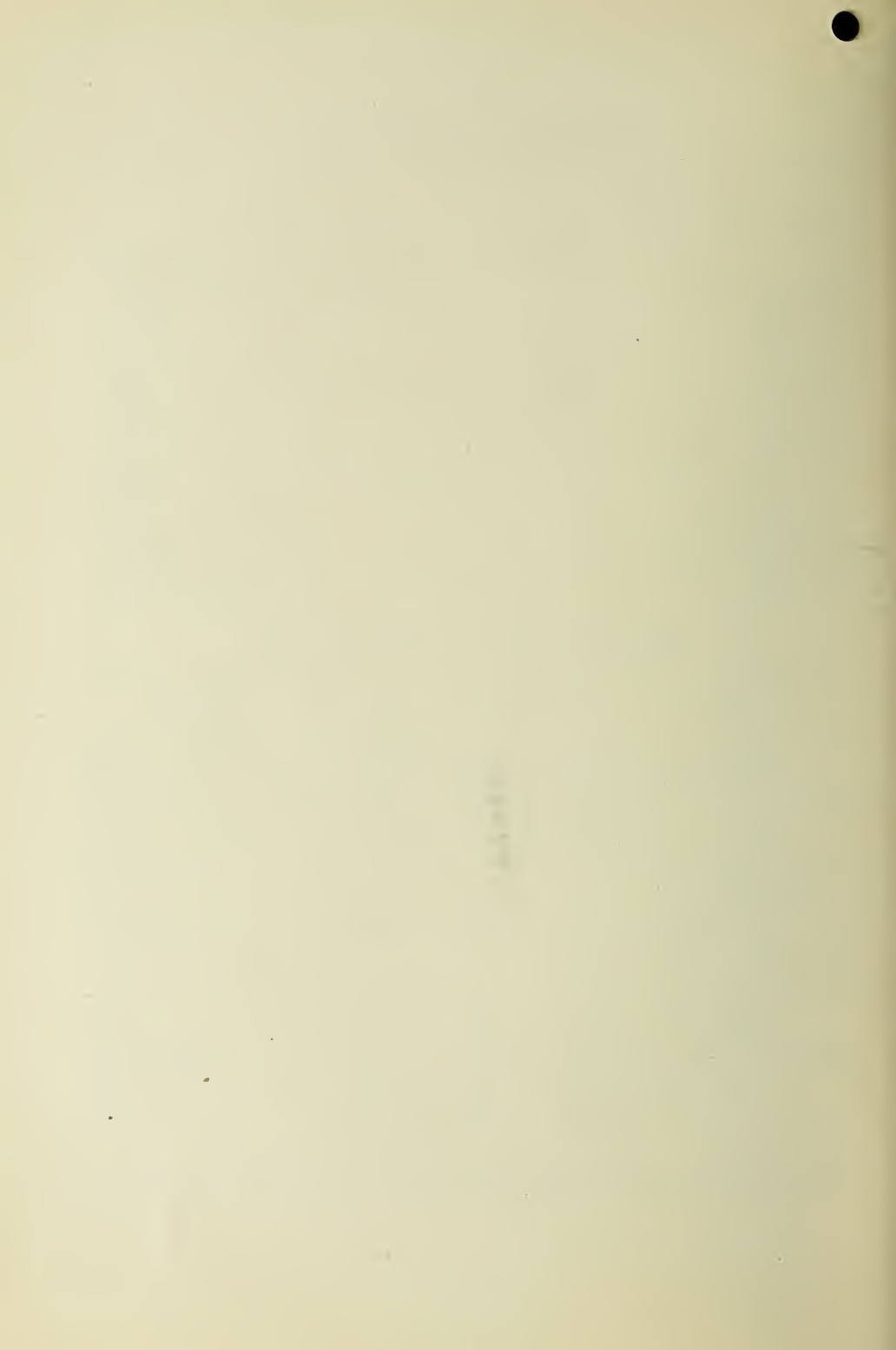
## “AT A GLANCE” STORAGE CHART

VEGETABLE	Best Temperature	Will keep Till	Remarks
Beets.....	33-38° F	May	Will keep better if in sand.
Carrots.....	33-38° F	May	Will keep better in sand.
Cabbage.....	32-37° F	March	Provide good ventilation between the heads.
Celery.....	33-38° F	January	Must be carefully handled.
Cauliflower.....	33-38° F	December	Retain the leaves and do not allow heads to touch.
Onions.....	35-40° F	May	In shallow layers on shelves or trays. Need air.
Pumpkins.....	40-45° F	January	Store in the dark. Do not bruise.
Parsnips.....	33-38° F	May	Keep in slightly moist sand. Leave some in ground all winter.
Potatoes.....	33-38° F	June	Provide good ventilation and sort over for decayed tubers.
Salsify.....	33-38° F	April	In moist sand or outside.
Squash.....	40-45° F	January	In a dry place. Do not bruise.
Swede Turnips.....	33-38° F	May	Keep on dry side. Easy to store.
White Turnips.....	33-38° F	April	Keep in sand or boxes.
Tomatoes.....	50-55° F	December	See special directions.
Apples.....	32-37° F	May	See special directions.

*The kindness of the Dominion Horticulturist, Central Experimental Farm, Ottawa, in providing the illustrations used in this pamphlet is gratefully acknowledged.*



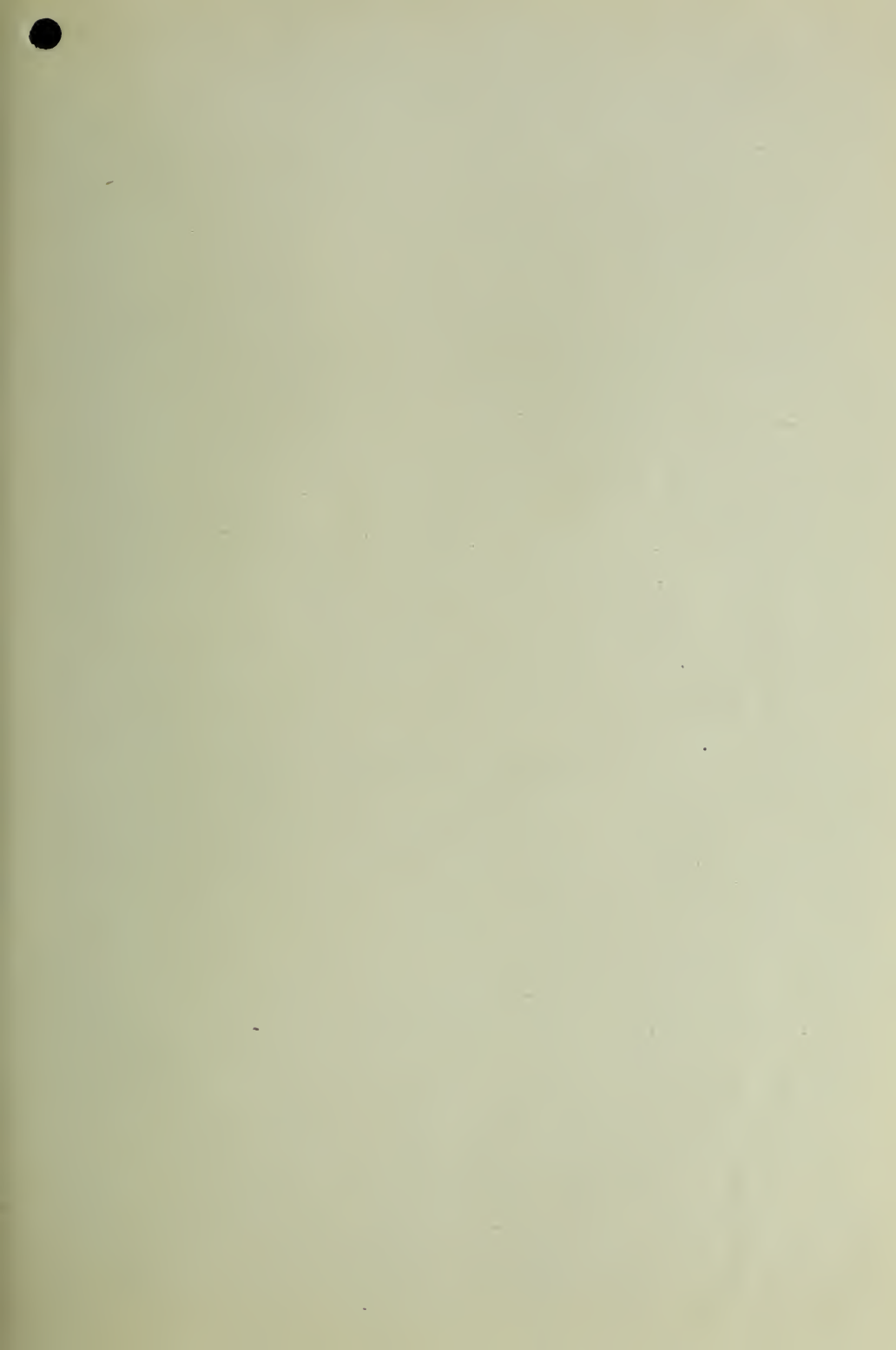














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