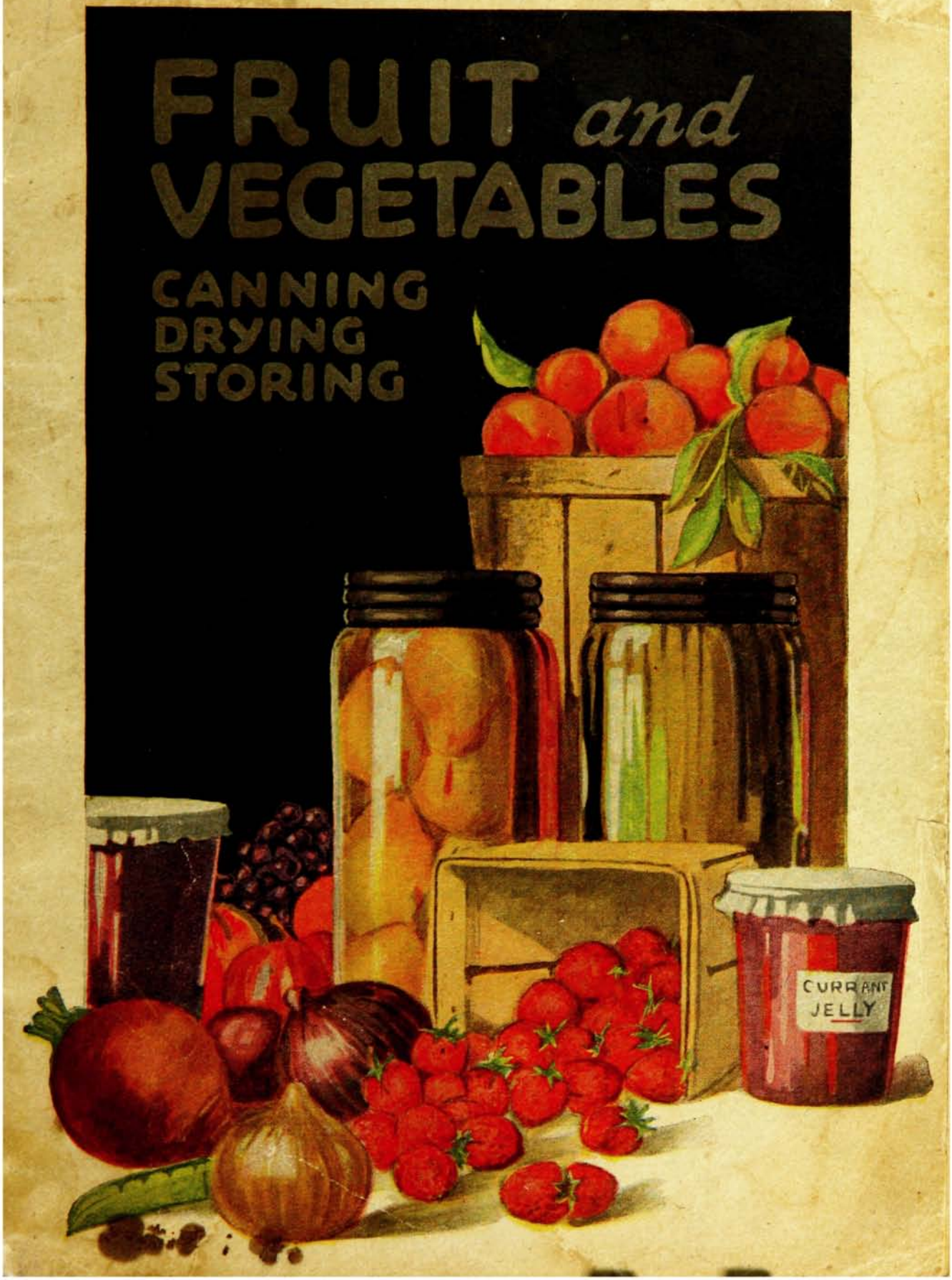
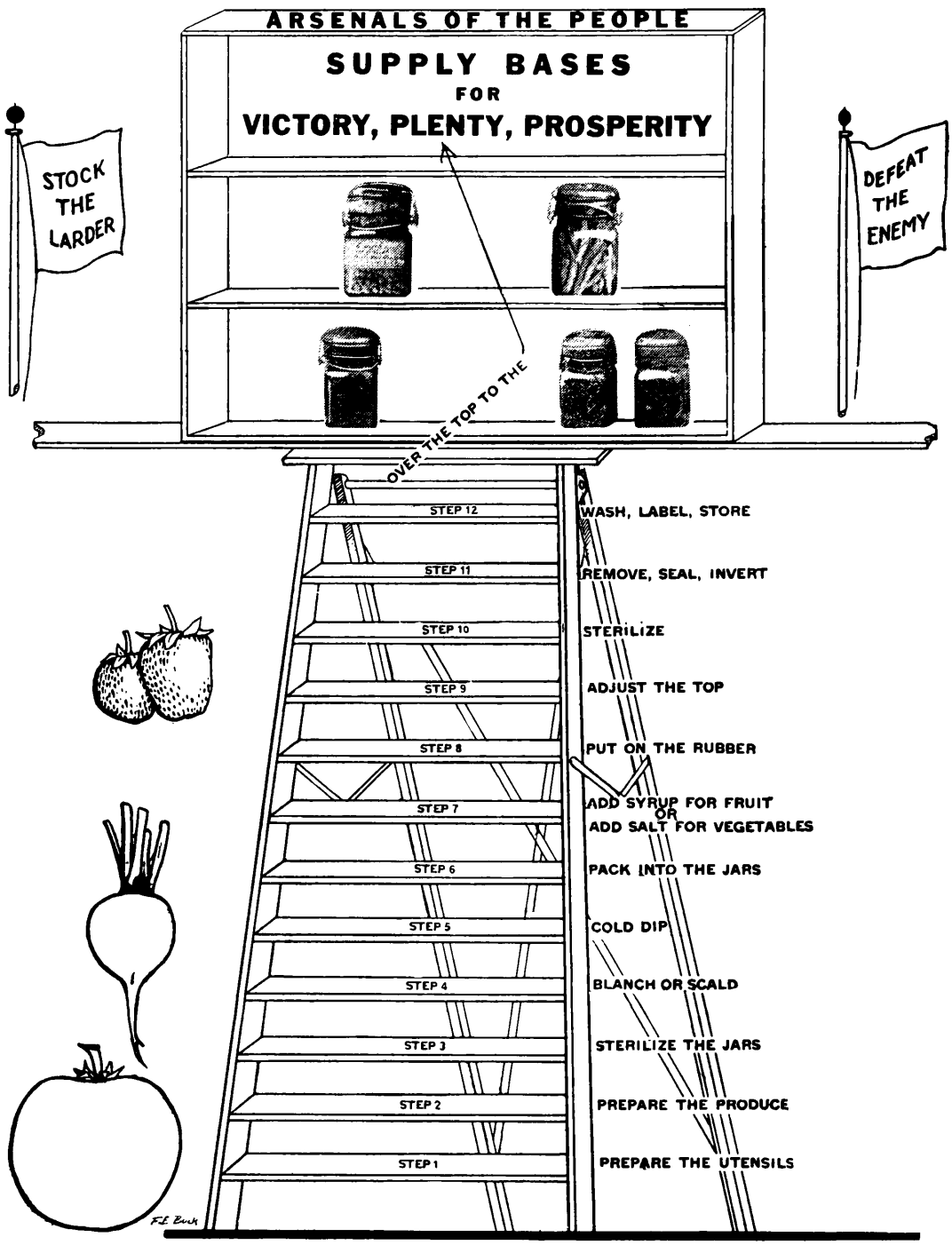
FRUIT *and* VEGETABLES

CANNING
DRYING
STORING



STEPS IN THE CANNING PROCESS



From a sketch by MR. F. E. BUCK, Assistant Dominion Horticulturist, Central Experimental Farm, Ottawa.

SAVE THE PERISHABLE FOODS

CANADA'S war gardeners and all classes of our people who have engaged in food production this year have done splendid service. The response to the call for more food has been magnificent and there is every prospect of a bountiful harvest. The need of food overseas continues to be great and, if we are to take the utmost advantage of our opportunity to feed our soldiers and Allies, we must make the fullest use of our food resources.

By eating fruit and vegetables freely while they are in season, and by canning, drying or storing our surplus for winter use, we can release more wheat and other foods for shipment overseas. At the same time we can reduce our own cost of living. Fruit and vegetables are conducive to health, and greater and more regular use of them throughout the year would have positively beneficial effects.

But these are perishable foods and in order to avoid very great waste—which would be little short of criminal, in view of the situation in Europe—they must be handled promptly and carefully. This booklet is intended to give simple, definite and reliable information for the guidance of those who are willing to do their part in saving for winter use our harvest of fruit and vegetables, and especially the home grown produce.

Canning, drying and storing of fruit and vegetables mean true food service. They are a natural development of the efforts of the War Gardener, and all may have a part in the work of making the most effective use of our 1918 harvest. By so doing every housewife can contribute to the attainment of the final victory.

CANADA FOOD BOARD

Ottawa, June, 1918.

Chairman.

TABLE OF CONTENTS

NOTE.—The services of Mr. F. E. Buck, Assistant Dominion Horticulturist, Ottawa, in the preparation of the material in this booklet are gratefully acknowledged.

HOME CANNING CALENDAR

FROM THE HOME GARDEN TO THE LARDER

MAY—This is the planting month. Sow those crops which will give the best supply of palatable and nutritious food during the winter.

JUNE—The garden becomes the larder for the next three months. Asparagus, if you have enough of it, can be canned with profit, also rhubarb this month or next.

JULY—Peas, young beets, carrots and other vegetables will be ready for canning this month. Fruits also are plentiful.

AUGUST—Fruits, beans, cauliflower, corn, Swiss chard, etc., should be put up this month.

SEPTEMBER—Can plums, peaches, tomatoes, corn, etc. Remember also that this is the month when plans for winter storage should be made.

OCTOBER—Store your crops. What about cellar storage and pit storage? See Storage Section of this bulletin.

NOVEMBER—Watch your stored crops. The attic in which onions and squash should be stored must be frost-proof.

DECEMBER—Take note of any failures in canning, etc. Try some of your dried products.

JANUARY—Extra care should be given to the stored crops. Sort out any decayed specimens. Don't let the storage cellar become too dry.

FEBRUARY—Plan your garden for next year. Estimate your needs on the present supply in your larder.

MARCH—Buy your seeds for the following season. Start early vegetables, such as early cabbage, in the house.

APRIL—Prepare the garden. Manure is the best fertilizer. Clean out your storage cellar.

COMMUNITY CANNING CALENDAR

FEBRUARY—The community clubs should organize or re-organize. Discuss the year's work for the members, especially the most suitable vegetables for them to grow in their gardens for canning purposes.

MARCH—Club members to meet and discuss the purchase of supplies, organization of the year's work and the equipment of the club building.

APRIL—Members to meet and hear addresses on the canning and home conservation of foods.

Appoint committees to obtain new members.

MAY—The club to meet in order to welcome and instruct the new members. Members' night to discuss helpful recipes and useful publications, etc.

JUNE—Club to arrange a visit to the gardens of some of its members. Demonstrations of certain gardening work.

JULY—The regular canning demonstrations of the club start this month. At the first meeting explain the uses of the canning equipment. Emphasize the importance of good quality of fruits and vegetables.

AUGUST—The regular demonstrations continue.
Appoint a committee to make arrangements for displays of canned goods at Exhibitions and Fall Fairs.

SEPTEMBER—Arrange a display of canned exhibits in the club rooms. Canning demonstrations conclude this month.

OCTOBER—Arrange for a review of the year's work.

SUCCESSFUL CANNING

THE THEORY OF CANNING—The canning of vegetables in glass sealers in the home is comparatively a new art. 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 all 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 at a sufficiently high temperature 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 exterior sources of re-infection, such, for example, 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.

CANNING AND ITS WAR-TIME SIGNIFICANCE—In the year 1895 the mystery previously attached to the art of canning began to disappear and canning became a commercial industry. This industry grew by leaps and bounds. It started in the year 1860; by 1890 it had a turnover in the United States of over $45,000,000. In the year 1916 the turnover had increased to thirteen times that sum and the canning industry is now established as one of the most important in the life of the nation.

The exigencies of war have had a wonderful influence on the art of canning, but not until a few years ago was there such a thing heard of as home canning. During the last few years canning as practiced in the homes of the people has played a very significant part in connection with the successful conduct of the war on the part of the Allies. Its two-fold development is most interesting. Commercially canned or preserved food in every conceivable form has made it possible for countries thousands of miles distant to contribute all types of food for the needs of the men in the trenches.

Garden produce grown in the home garden and canned in the home has also made it possible for these same countries to release tremendous quantities of wheat and cereals which would have been otherwise required for home consumption. There is still a third phase in the development of canning and this is known as community canning. It also promises to have very important bearing on the future economic life of the nation.

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 attemping to can. This would be true also of fruits, like peaches and pears.

COMMUNITY CANNING

Community canning is the most recent phase of the art of canning. It is due to the fact that there exists today a greater opportunity than ever before for successful co-operative effort.

Those who are able to organize community effort for the canning of garden produce will be amply repaid for their trouble. Community effort is frequently much better and more efficient than individual activity in the kitchen. This is especially true in this time of stress and food shortage.

The tremendous success of the war-time gardens is due partly to the fact that it had been splendidly looked after by patriotic and other civic organizations. These organizations should remember that to complete gardening activities the individual gardeners should be organized into groups in order that the produce may be economically and scientifically conserved.

In the case of womens' organizations in large cities or co-operative associations in the smaller country places it should not be difficult to organize a canning campaign during the summer on a community plan. Many of these organizations have already become responsible for increased production and they now have a great opportunity to spread the gospel of scientific and profitable means of saving and conserving food.

In community canning enterprises there is less liability for the individual to make mistakes, as one working with the other tends to promote efficiency. Economy in the purchase of supplies is also another great consideration, while the spirit of good-fellowship which is decidedly encouraged in such work is another reason for such co-operative effort. Individual instruction in the matter of canning is difficult under the best of circumstances, but the individual working with others is quick to appreciate the successes and failures of fellow members. This promotes efficiency and self-confidence. Individuals working together in such a manner work to a certain standard, which standard is lived up to. Instruction can be given, moreover, in a more definite and scientific way to a number of workers than it can to the individual. This also saves time and makes for efficiency. Economy in the matter of buying supplies on a large scale is a strong point in favour of community canning.

Should it be impossible for organizations to organize a community club for canning, it might be possible for organizations like the Women's Canadian Clubs, Soldiers' Wives' Leagues and Church organizations to band together and purchase supplies for the requirements of the householder on a wholesale basis. Existing organizations should be used wherever possible, as in many cases such organizations have rooms and a certain amount of equipment which could be used for community canning. When a hall must be rented for the purpose, possibly a membership fee of $1.00 could be assessed upon each member in order to pay expenses. Halls fit for canning purposes, however, must be equipped with water supply and heat.

Community canning has been tried and has succeeded in the United States. If a fully equipped club is not possible this year, co-operative and helpful work could be undertaken following along the lines suggested below:

(1) Various organizations in a centre to meet together and appoint a canning committee.

(2) This committee to appoint sub-committees, such as (a) a committee to look after the hall arrangements and equipment of the hall.

(b) Another committee to be responsible for the purchase of a few necessary supplies for instruction and demonstration purposes.

(c) Another committee, or preferably one person, to be responsible for the actual work.

It is further suggested that a day be set aside for definite crops. For instance, one demonstration should be devoted to the canning of corn, another to raspberries, or possibly one fruit and one vegetable at the same demonstration.

Complete community canning outfits cost a considerable sum of money and it is doubtful whether many organizations would be prepared to spend too large a sum in equipment, or whether such equipment could be obtained on short notice for this season. However, much can be done (this year) by using the simpler appliances such as the wash boilers used in home canning.

In many cases it has been found that the services of high school girls can be profitably used in such work. In one district in the United States about eight thousand community club members put up over two hundred thousand containers.

In some community canning work carried on at Parkhill, Ont., last year a small 5 h.p. vertical steam boiler was used to generate the steam supply. The water bath principle of canning was used and two wooden vats were used, one for sterilizing the empty jars and the other for sterilizing the filled jars. These vats were made at a local mill to hold 72 quart jars each.

The Ottawa Horticultural Society also carried on a successful series of canning demonstrations in the City of Ottawa last year. The demonstrations were largely attended.

EQUIPMENT FOR COMMUNITY CANNING

It is not easy to be specific with regard to equipment for community canning. From three hundred to six hundred dollars will buy all the tables, slicers, paring machines, seeders and sealers, together with the canning outfit proper to do several thousand quarts per day.

Such an equipment should can enough produce to meet the requirements of about twenty-five families. This would work out at a cost of about twelve to twenty dollars for each family. In some cases, however, as in the case cited above, local ingenuity and patriotism can be relied upon to reduce this cost. The work is new, and should be encouraged, and in the case of a large factory, for example, the employers would no doubt be willing to provide several of the essentials; and this, if the employees could be organized into a club, would materially reduce the initial cost.

If profitable returns are assured, an initial outlay, however heavy, should not be looked upon as a discouraging factor.

DEMONSTRATING CANNING AND DRYING BEFORE AN OUTSIDE AUDIENCE

Community canning can often be done in the open. In hot weather it is better than in a small building. In this case the building holding the supplies was at the rear of the demonstrators. A special "Home Canner" is made for use outside. Many people have used it with success. It burns wood or coal and is inexpensive.

"CANADIAN CROPS FOR VICTORIES IN FRANCE"

PART I.

CANNING IN THE HOME

SOME EXPLANATIONS

Modern canning depends for success upon **heat** and **rubber rings.** 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.

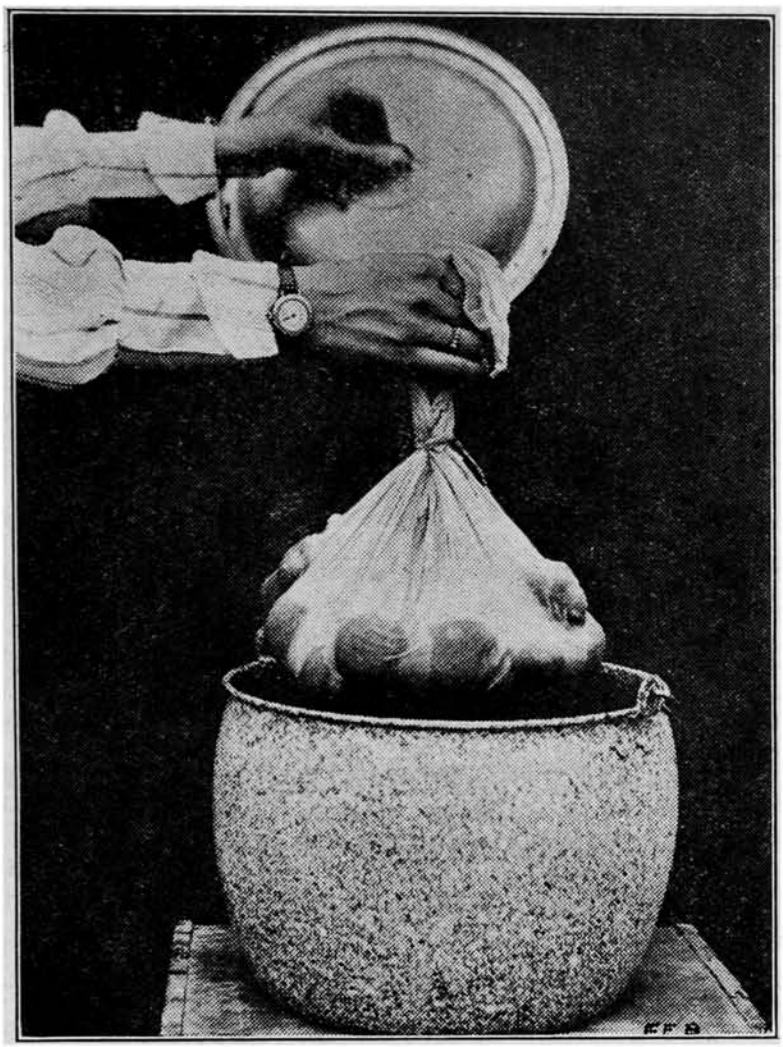
1. **SINGLE BOILING**—This is the commonest method and if carried out carefully there will be but few failures. A common pot or wash boiler is used by making a false bottom of slats to keep the jars off the bottom and thus prevent breakage. The water in the boiler should come half-way up the jars, or with vegetables it may even cover the jars. A steam cooker such as is ordinarily used in the kitchen works well and is a little more convenient than the wash boiler. The time of boiling differs with different vegetables, but in any case the time of sterilizing is counted from the time the water starts to boil vigorously in the boiler.

See page 30 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 baskets, 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

This 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 30.

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 odors 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.

3. Wash fruit or vegetable 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 cheesecloth, or a wire basket, and dipping into boiling water for 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.

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 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 jars.

10. Sterilize by putting the jars into a boiler with false bottom. The water in the boiler should be at least half-way up the outside of the jars. For time see schedule on page 30 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 the dark or wrap each jar in paper to prevent bleaching.

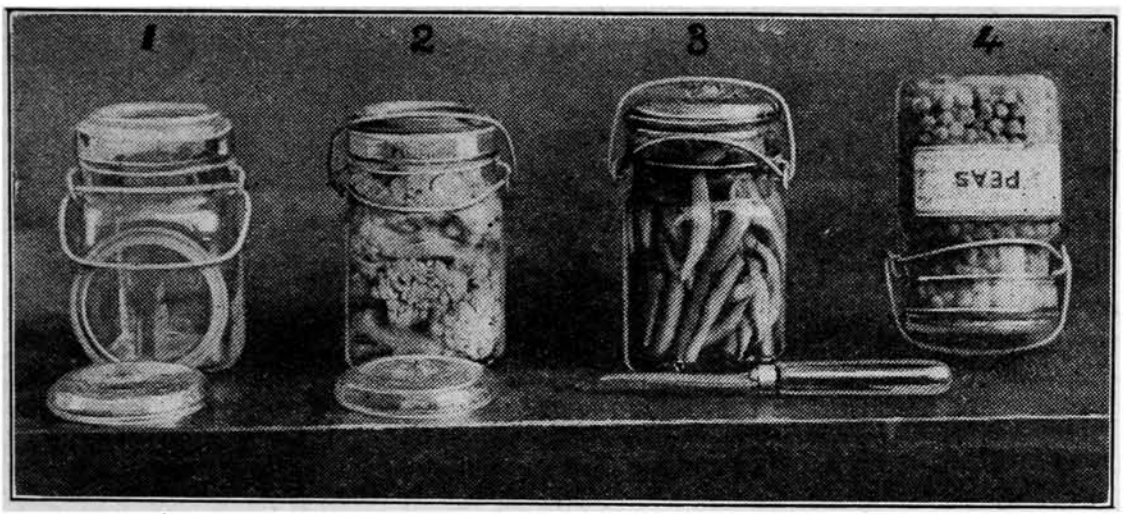
THE SYRUP TABLE.

For sweet fruits.....	1 pint	sugar to	2 pints	water.
For slightly acid fruit.....	2 pints	sugar to	3 pints	water.
For acid fruits.....	1 pint	sugar to	1 pint	water.
For very acid fruits.....	2 pints	sugar to	1 pint	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.

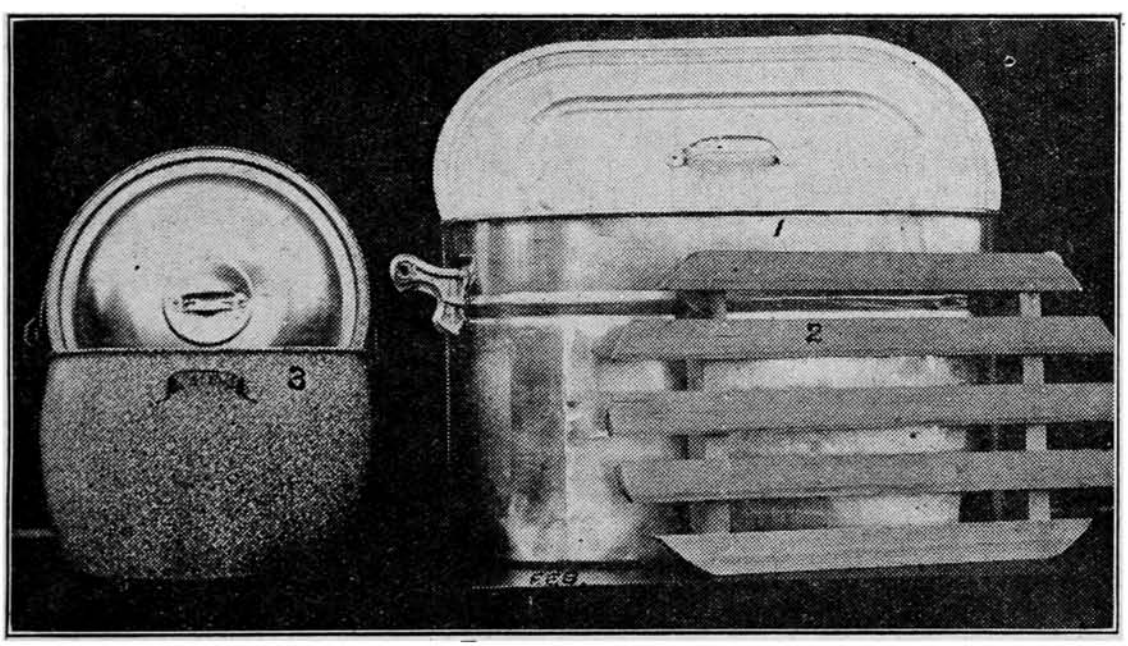
For quart jars of large fruit about 1 pint of syrup is required. For quart jars of small fruit about ½ pint.



ILLUSTRATING FOUR STEPS IN THE CANNING PROCESS

(*see page 10 for other steps*)

1. The jar ready for filling.
2. A jar packed with cauliflower and filled with water and salt.
3. A jar with the cover on and clamp left loose. Ready for boiling.
4. Jar inverted after boiling to test for leaks.



THE SIMPLEST TYPE OF CANNING OUTFIT

1. Tin wash boiler. 2. False bottom for boiler. 3. Scalding pot.

CANNING RECIPES IN DETAIL

BEANS—String and remove ends of beans. Blanch five minutes, then dip in cold water. Cut in one- or two-in. pieces and pack closely in jars. Add one teaspoon of salt to each quart jar. Fill the jars with cold boiled water. Adjust rubbers and tops. Sterilize 2 hours. Young beans may be packed whole.

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

CAULIFLOWER—Cut flowered portion into pieces small enough to be easily packed in jars. Place in water, slightly salted, for one hour. Blanch five minutes, then cold dip. Pack in jars. Add one teaspoon of salt to each quart jar. Fill jar with boiled water. Adjust rubbers and covers. Partly seal. Sterilize one and one-half hour.

CORN—Blanch the corn on the cob five minutes. Cold dip for one minute. Cut off tops of the kernels and scrape off the rest of the pulp. Pack and press firmly into jars so that the corn juice may fill all spaces. Add one teaspoon of salt to each quart jar, and if the milk of the corn is not sufficient to fill the jars, add water. Adjust rubbers and covers and partly seal. Sterilize three hours.

GREENS (Spinach, Beet Tops, etc.)—Choose young leaves and wash carefully. Blanch twenty minutes in a steamer, then cold dip. Pack tightly in jars. Add one teaspoon of salt to each quart jar. Fill jar with boiled water. Adjust rubbers and covers. Partly seal. Sterilize one and one-half hour.

PEAS—Wash and shell, blanch five minutes, then cold dip. Pack in jars. Add one teaspoon of salt to each quart jar. Then fill with boiled water. Adjust rubbers and tops. Partly seal. Sterilize three hours.

TOMATOES—Choose 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 tomato juice (made by stewing large or inferior tomatoes about ten minutes and pressing through fine sieve). Adjust rubbers and covers. Partly seal. Sterilize thirty minutes.

PEACHES—Blanch fruit two minutes. Cold dip. Remove skin, cut in halves and pack in jars. Fill with syrup as for sweet fruit. Sterilize fifteen to twenty minutes according to the ripeness of the fruit.

RASPBERRIES—Pick over and wash fruit. Pack in jars as closely as possible without crushing. Fill with syrup as for sweet fruit. Sterilize twelve minutes.

PEARS—Pare, cut in halves and remove the core. Pack in jars. Add syrup as for sweet fruit. Sterilize twenty minutes. Flavour may be varied by adding to each quart jar juice of half a lemon, or by sticking a whole clove in each half pear.

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; to make certain boil it first and sterilize the jars in any case.

THE QUESTION OF RUBBERS

Careful attention to detail is sure to bring success in canning. People in all parts of the country had success last year, but NOT ALL had equal success! Why? Perhaps the chief reason may be summed up in this word "RUBBERS." Rubbers from the 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.

OTHER METHODS OF SAVING FOOD

1. **DEHYDRATING OR DRYING**—The modern art of dehydrating fruits and vegetables is the same as the older art of drying practised by our forefathers.

Dehydrating signifies that the water has been removed from any substance. In dehydrating or drying this is all that does happen, the water is the only thing that is removed and no chemical change takes place in the fruit or vegetable.

War conditions have brought the old art of drying into prominence and modern equipment has stimulated it and made it a profitable and safe method of saving food. For its advantages and suitable methods of drying products in the home see the section of this bulletin devoted to Drying.

2. **STORAGE**—Nearly all of the vacant lot and home gardens which started under war conditions grow vegetables. Very few as yet grow fruits. The majority also of these gardens grow potatoes. Under such circumstances proper cellar storage is very important because perhaps as high as seventy-five per cent of the crop of many of the gardens has to be stored. One section of this bulletin is therefore devoted to the question of Home Storage.

3. **PRESERVING**—Preserved fruit is fruit which has been cooked in sugar syrup until it is clear, tender and transparent. The fruit, whether whole or in pieces, should keep its form and plumpness and be crisp rather than tough or soft. To attain this object it is often necessary to start cooking the fruit in a thin syrup.

Preserving differs from canning in the method of cooking and packing the fruit in the containers. It is more like jam making. See section of this bulletin devoted to preserving recipes.

4. **JAM MAKING**—Whole small fruits are generally used in jam making and the fruit does not remain whole as in the case of preserves. A jam to be attractive should have a bright clear colour. The broken fruit gives a fine colour and rich flavour. About half of the fruit should be under ripe, as such fruit contains more acid and this with the pectin of the fruit gives a jelly-like consistency to the finished product.

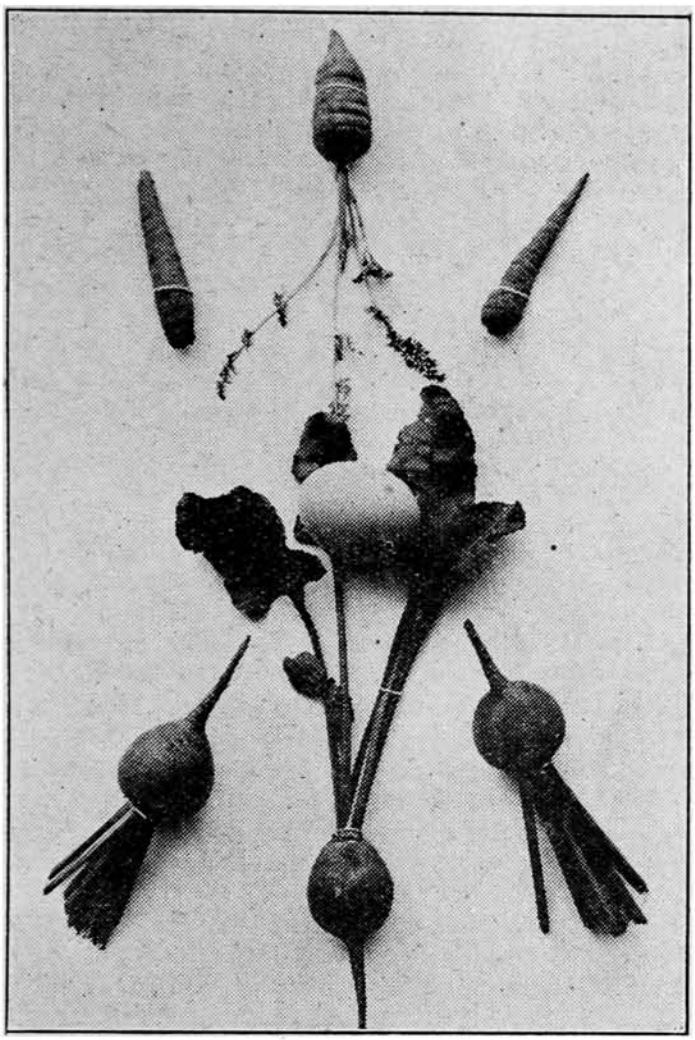
Cook rapidly and over a clear fire. A better colour and flavour will result if the fruit is cooked in small quantities and with three-quarters of a pound of sugar to a pound of fruit. See also section devoted to jam making.

5. **PICKLING**—Much wholesome food may be preserved for home use by means of pickling. In pickling, the food is preserved by means of well-known preservatives, such as salt and vinegar, either with or without the addition of spices or sugar. In many cases unripe fruits such as unripe tomatoes can be used to advantage this way. The commoner vegetables best adapted for pickling are cucumbers, tomatoes, beets, onions, carrots, artichokes and cabbage.

Many of the fruits also can be used to advantage for sweet pickles, those most generally used being apples, plums, grapes, gooseberries, pears, cherries and watermelons.

Mixed pickles also constitute an appetising form of food. Such vegetables as beans, tomatoes, cauliflower, onions and cucumbers are largely used in the making of mixed pickles.

The preservative may be used at various strengths, although no pickle will keep perfectly unless the air is excluded. Cheesecloth and melted paraffine are often used to make the containers air-tight. See section of this bulletin devoted to pickling recipes.



Young beets for canning should be pulled when about the size of a small egg; carrots when about three inches long.

The egg in the middle of the illustration shows relative size.

A NEW METHOD

There is a new method of using garden beets. Have you tried it? It is well spoken of by all those who have.

The beets are used when quite young and tender. Their flavour is at the best then. They are pulled when about the size of an egg and canned. The method is described on page 12.

Custom has prescribed us from trying this method sooner. There is no real reason why the beets should be allowed to grow to full size, as for many people they are then less palatable. Every person likes the young canned beets.

Mature beets take longer to cook. Twelve jars of young canned beets will supply a household with a delightful vegetable for perhaps a month. The quantity required

to fill twelve jars can be cooked with about the same amount of fuel as it would take to cook two days' supply of the older beets. They can be prepared with about the same amount of labour.

Why spend fifteen minutes each day during the winter preparing the older beets and a large amount of fuel each time to cook them when better results may be obtained from one morning's work devoted to the canning of young beets?

Save your time and fuel. Please your family. Try young carrots, spinach and the mid-ribs of Swiss chard in the same way.

Don't follow custom for the sake of custom. Try something new. If it is not a better method return to your former method.

WHY IT WILL PAY YOU!

It will pay you to can as great a quantity as possible of vegetables and fruit this year because:—

1. It is economical.
2. It gives a variety of diet.
3. It is in the interest of the family's health.
4. It saves sugar.

The day's food should provide for the body's constant need the following substances:

A. **MINERAL SUBSTANCES** such as lime salts for building and repairing bone wastage and for neutralizing acid substances produced by the digestive organs. **FRUITS, VEGETABLES** and milk are the source of supply of these substances.

B. **PROTEIN**—Protein is needed for growth and for fuel. Milk and meat supply this, but acids are produced when such are digested and **Vegetables** are needed to supply substances to neutralize these acids.

C. **STARCH**—Starch is the chief food of the body. Cereal foods supply starch, but the **potato**, the main vegetable crop of the war-time garden, also consists largely of starch.

D. **SUGAR**—Sugar is another form of body fuel and should be supplied for the body's use. **Fruits**, syrup and honey contain large percentages of sugar.

E. **CELLULOSE**—Cellulose makes up the framework of garden produce. **Fruits and Vegetables** supply it to the body, without which it is difficult to prevent constipation and other body ills.

F. Fats and other substances in small quantities are also required by the body. **Fruits and Vegetables** help to supply some of these. Nuts contain considerable fat.

I. FRUITS AND VEGETABLES WHICH CONTAIN MINERAL MATTERS AND BODY-REGULATING SUBSTANCES.

Fruits	Vegetables
Apples, pears, etc.	Salad vegetables, such as lettuce, etc.
Bananas	Greens of all sorts, such as beet greens,
Berries of all sorts	Potatoes and root vegetables
Melons	Peas, beans, etc.
Oranges and citrous fruits.	Tomatoes, squash, etc.

II. FOODS SUPPLYING STARCH AND SUGAR

The cereal foods made from wheat, corn, barley, oats or rye
Potatoes and other starchy vegetables
Sugar, honey, molasses, syrups, preserved and dried fruits

SHALL WE USE BROWN OR WHITE SUGAR?

Measures which have been taken by the Canada Food Board seem to assure that, with economy in the use of sugar in private homes and elsewhere, there will be a sufficient supply of sugar for the canning and preserving season. It should be pointed out, however, that yellow and brown sugars can be used for canning purposes with entirely satisfactory results. Brown sugar is slightly cheaper than white granulated sugar and it is desirable to conserve the latter, as far as possible, for those purposes for which it is essential.

The following statements are based on a report of the Chief Analyst of the Dominion Government, who states that "it is only want of knowledge on the part o f the public which prevents the extended use of yellow and brown sugars."

REFINED SUGAR.

Refined sugar, whether made from the sugar cane, sugar beets, sorghum, maple or palm, is required by law to contain at least 99.5 per cent of sucrose which is the sweetening constituent of sugar and it has to be free from all artificial colouring matter. Analyses made in the Dominion Laboratory show that the refined sugar on the Canadian market is of a very high grade.

YELLOW OR BROWN SUGARS

There are three grades of these sugars which are generally classified as bright yellow, yellow and dark yellow, or on another basis as yellow, golden and brown. These sugars contain from 7 to 10 per cent. less sucrose than refined sugar, but they have, in addition from 4 to 8 per cent. of invert sugar. This invert sugar has a sweeter taste than cane sugar and is the sugar found in honey, molasses and fruits.

WHITE AND BROWN SUGAR COMPARED.

When the consumer purchases 100 pounds of refined sugar he gets 99.5 pounds of sucrose. When he buys 100 pounds of yellow sugar he gets 96.4 pounds of sucrose. Thus the yellow sugar should be bought at about thirty cents per 100 pounds cheaper than the refined sugar. Inquiries made at several retail stores elicited the information that there is really a difference of about fifty cents in the selling price per 100 pounds. Wherever then either of these sugars can be used the yellow variety should be employed. This should apply to all baking and much more table use than is customary and if the people knew the real value as it has been shown here there would be little doubt that they would respond heartily.

Referring to the different kinds of brown sugars, it is further stated that, in the case of raw beet sugar, the refining process is necessary as it has a disagreeable, soapy taste and odour, but on the other hand, raw cane sugar is aromatic, fragrant and delicious to a far greater degree in the raw state than when it is refined. Certainly the Demerara crystals so much used in the West Indies are very highly esteemed. In the retail stores yellow sugar is sold at about one-half cent per pound less than granulated sugar.

The Canada Food Board calls the attention of the Public to these statements and recommends that, whenever possible, brown sugars be used to can and preserve fruits.

PRESERVING AND OTHER FAVOURITE RECIPES

RHUBARB CONSERVE—Wash rhubarb, cut into small pieces and for every three pounds of rhubarb allow three oranges, three pounds sugar, three-quarters cupful water, one pound seeded raisins and half pound shelled pecans (if desired).

Slice oranges, rind and all, wash raisins and scald nuts. Mix all together and boil over a low fire about forty-five minutes. Pour into sterilized jars and seal at once.

YELLOW TOMATO PRESERVES

4 lbs. fruit
6 lbs. sugar
2 qts. water
¼ oz. ginger
½ oz. cinnamon
½ lemon

Boil together water, sugar, lemon and spices for fifteen minutes. Add fruit gradually and cook gently until fruit becomes bright and clear, stirring occasionally and being careful not to allow it to burn. Pack into sterilized jars and seal at once.

MEDLEY FRUIT CONSERVE

2 lbs. peaches
2 lbs. quinces
1½ lbs. pears
½ lb. apples
3 lemons
4½ 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.

GREEN TOMATO MINCE MEAT

1 peck green tomatoes
1 peck apples
6 lbs. brown sugar
2 lbs. currants
2 lbs. raisins
2 teaspoons cinnamon
2 teaspoons cloves
2 teaspoons allspice

Cook three hours and seal.

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.

SPICED GRAPES—Four quarts grapes, one-half pint vinegar, one and one-half pound sugar, one-half teaspoon each cloves and cinnamon. Remove the skins of the grapes. Boil the pulp five minutes and strain to remove the seeds. Then put the skins and pulp together, add the sugar, vinegar and spices and cook until thick as marmalade.

CITRON PRESERVE—Two pounds citron, two pounds sugar, two cups water, two lemons, and small piece of ginger root to flavour. 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 and ginger root have been added. Fill jars and seal as you would any fruit cooked by the open kettle method.

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.

STOCK YOUR LARDER

Every householder this year should figure on canning or preserving by some method the normal supply for the household, with an additional supply of twenty-five to thirty per cent. This is the year of crisis in connection with the food supply of the world. Should wheat be required in larger quantities next year for the Allies' needs our surplus of vegetables will enable us to give it up to them. **Stock your larder from your Home Garden!**

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 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 1 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 unti ltender. Less juicy fruits like the apple require more water.

Allow to simmer until tender.

Strain through a bag of flannel or double cheese-cloth.

Measure out proportion of sugar and heat on a platter.

Add sugar to juice when it begins to boil.

Boil rapidly. (Probably 20 minutes, or 10 minutes for currant and grape jelly). 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, ¾ 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.

PICKLING RECIPES

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 tablespoonful 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.

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.

GREEN TOMATO PICKLES—Take four quarts of green tomatoes, four small onions and four green peppers. Slice the tomatoes and onions thin; sprinkle over them one-half cup of salt and leave overnight in a crock or enameled vessel. The next morning drain off the brine. Into a separate vessel put one quart of vinegar, one level tablespoonful each of black pepper, mustard seed, celery seed, cloves, allspice and cinnamon and three-quarters cup of sugar. Bring to a boil and then add the prepared tomatoes, onions and peppers. Let simmer for twenty minutes. Fill jars and seal while hot.

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, one quart of sugar, one tablespoonful of cinnamon, cloves, mace and allspice. Allow to stand overnight in this syrup; next morning boil for five minutes. Pack in jars and seal tightly.

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.

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.

PART II.

DRYING FRUITS AND VEGETABLES

Drying of most of the ordinary fruits and vegetables has been greatly stimulated by war conditions.

The advantages of drying fruits and vegetables over canning them are in economy of space, lessened cost for jars, etc., lessened risks from frosts or heat injury, and the ease of shipment. Drying should be resorted to when canning is impracticable or to make the best use of all garden produce, as smaller quantities of fruits or vegetables can be dried than can be profitably canned.

PREPARATION OF THE MATERIAL

As in canning so in drying, all material should be carefully prepared. Cleanliness is essential. Fresh fruit and vegetables should be used, and these **should be young and tender.** Vegetables should be cut into slices or strips. Slices should be from one-eighth to a quarter of an inch thick. Too thin slices are difficult to handle and lose flavour. Too thick slices do not dry so quickly.

For slicing, a sharp kitchen knife or a special slicer may be used, or in some cases, the meat cutter answers very well. Most root vegetables should be peeled before slicing. Blanching is also desirable in some cases to remove strong flavours and to loosen the fibre, which promotes quicker drying. The blanching consists of plunging the vegetables into boiling water for a few minutes. After they have been blanched most vegetables should be dipped for a few seconds into clear, cold water. The reason for this is stated in the article on canning.

METHODS OF DRYING

Fruits and vegetables may be dried in several different ways. There is first of all the old-fashioned method of "sun drying." It is inexpensive, simple and satisfactory where there is enough sun. The produce is spread out in thin layers on trays, sheets of paper or muslin. Muslin or wire screening should be used as a covering to keep off the insects.

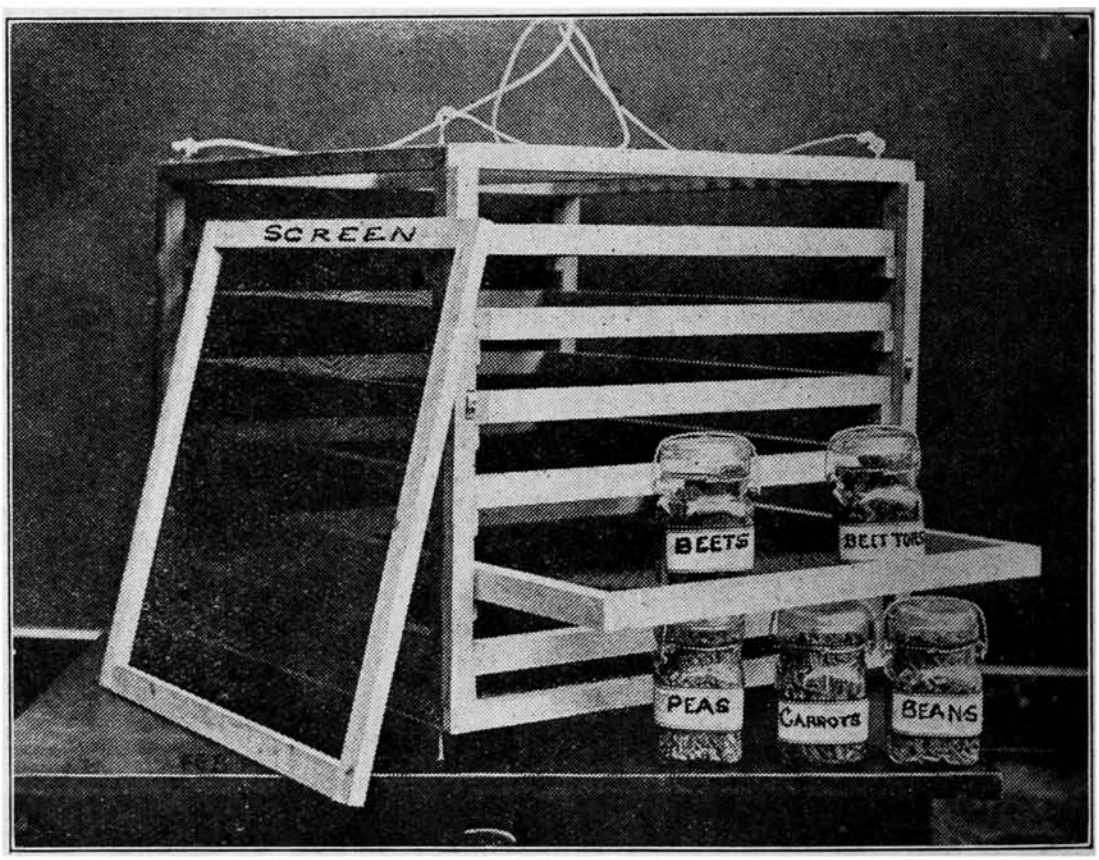
The most modern and the quickest method is that of using an electric fan either with or without artificial heat. Vegetables dried by this method are not so liable to discolour. The cost of running an electric fan is very inexpensive, generally less than a cent per hour, and where one is available this method gives satisfaction.

The third method, known as the "artificial heat" consists of utilizing the heat of the stove or of the oven. For most town and farm homes this method is the most practicable. Note the following points:—

1. A gentle heat at the start is desirable. High temperature at the start generally results in the formation of a hard surface over a juicy interior.
2. After a short time increase the temperature to 130° F., and it may run to up 150° without any injury.
3. Products should not be dried hard or they will not resume their original shapes.
4. Products should be dry and leathery when finished and will not mould if protected from a moist atmosphere.
5. All fruits and vegetables should be spread out on the trays in thin layers and occasionally moved or the trays should be changed.

DRIERS

Driers of various designs may be used. For home drying those of simple construction are quite successful and can be made in the home. A typical drier consists of a number of trays, each tray consisting of a sheet of small-meshed galvanized screen or wire netting, tacked to a framework of wooden strips about an inch or less in thickness. Six to twelve trays are used in each drier. The trays are placed above each other so that the heated air can pass through them or over them. The drier may be placed over the stove or immediately on it; in the latter case it is necessary to encase it in a galvanized sheet-iron covering.



A simple form of drier for utilizing the heat from the stove. It may be placed on the stove or suspended above it on a swivel arm and swung out of the way when the stove is needed for other purposes. Its construction is very simple.

Requirements—

About 24 feet of inch square strips for the framework.

About 36 feet of inch square strips for the trays.

Window screen netting 20-inch width to enclose the framework and to form the trays, or a double thickness of cheesecloth may be used for the trays.

Four hooks and cord to suspend.

Four screw nails to raise it two or three inches from the stove.

The principle involved in a good drier is that which induces the heated air to enter at the bottom, pass over the product as well as through it and out ventilation holes at the top. In doing this it gathers the moisture and dries the product uniformly in most of the trays. Trays at the top should be changed occasionally with those below.

AFTER TREATMENT OF THE PRODUCT.

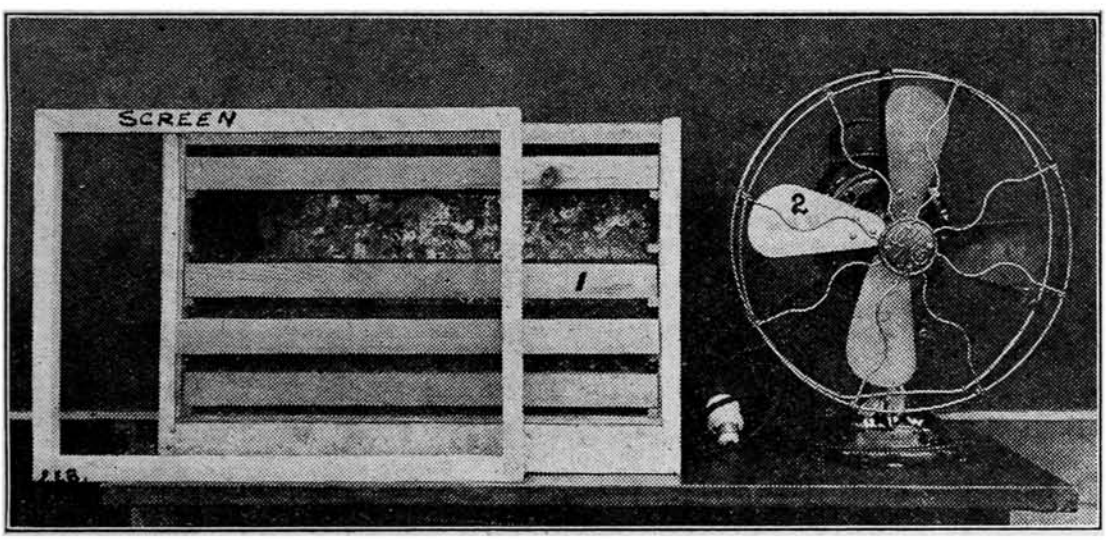
After the fruit or vegetables have been dried it will be necessary to "condition" them. This consists of putting the material into boxes and pouring from one box into another so as to mix it thoroughly and give the whole mass an even degree of moisture. If too moist re-dry for a short time, then store away in glass jars, tin cans, etc., in a cool, dry, well ventilated room.

FRUITS WHICH MAY BE DRIED SUCCESSFULLY.

Apples, pears, peaches, plums, raspberries, currants and blueberries.

VEGETABLES WHICH MAY BE DRIED SUCCESSFULLY.

Sweet corn, beans, peas, beets, turnips, parsnips, cabbage, spinach, beet tops, celery, rhubarb, squash, cauliflower, pumpkins.



1. A new type of drier which can be used in four ways. (a) On the stove. (b) On the oven door flush with the open oven. (c) With an electric fan. (d) On the oven door and with an electric fan, combining "artificial heat" and "air blast" methods.

This drier is constructed in a similar way to the hanging drier. Galvanized sheet iron is used to completely enclose it. Doors each side made of the same material which are made to lift out, enable it to be used as an "air blast" drier.

2. Electric fan used with the above drier.

DRYING RECIPES IN DETAIL

BEANS—Wash, remove stem, tip and strings, cut or break in pieces one-half to one inch long. Place on trays and dry. Beans can also be sliced lengthwise and then dried quickly. "Condition" for a few days, then pack away in bottles, boxes or pasteboard boxes.

BEETS, SWISS CHARD, etc.—Choose young plants, wash carefully. Cut in sections about one-quarter inch long, both leaf stalk and blade. Spread on trays and dry. "Condition" and pack away as described for beans.

CORN—Boil or steam on the cob ten minutes. Drain well and cut corn from cob, using a very sharp and flexible knife. Dry from three to four hours at 110 to 145° F. Corn may be dried in the sun. Dry in the oven ten to fifteen minutes and finish drying in the sun. "Condition" for a few days. Corn may be packed in boxes, bottles, cartons or in cheesecloth bags hung in a dry place. If hung in bags it is advisable to give the bag an occasional shake to loosen up the corn and permit free circulation.

PEAS—Wash in the pod, shell and dry as soon as possible by spreading on trays and using any of the three methods. Test for dryness by cutting a pea in half and if there is no sign of moisture inside, the peas are dry enough. Condition and store as for beans.

SOUP MIXTURE—Shred or cut in small pieces fresh, well washed vegetables suitable for soups or stews. Beans, carrots, celery, cabbage, onions and turnip make a good mixture. Dry separately on trays, then mix together and condition for a few days. Pack as for beans.

This has proved a boon to the busy housekeeper when preparing a meal, as it is only necessary to add a spoonful or two of the mixture to soup or stew instead of preparing each vegetable separately.

APPLES—Apples that will not keep over winter may be dried successfully by any of the three methods. Prepare by peeling, coring and slicing one-quarter inch thick, then dropping in brine made with 1 tablespoon salt to 2 quarts water. This keeps them white. Spread on clean towels to absorb excess moisture, then on trays till dry and leathery, but not brittle. Condition and store as for beans.

PART III.

WINTER STORAGE OF VEGETABLES AND FRUITS

Crops grown during the summer should have as much thought bestowed upon their winter care as upon their summer culture and the proper winter storage of the very large extra quantities of vegetables produced by owners of small gardens or vacant lots is a matter of the greatest importance. About 75 per cent. of garden produce can be successfuly stored. Will you not store all you can? Should you have to spend a little money in providing a storage room for vegetables the investment will be a good one. It is a business proposition. Properly stored vegetables

have all the qualities of those freshly gathered from the garden and from a health standpoint they are invaluable. If you have them for winter use you may save doctors' bills.

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:—

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 a 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 this year these 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 eight 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 four 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 eight inches, or even ten inches. It may be advisable, in exposed places, 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 more 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 a well-drained spot. Stand the plants upright in the trench and leave until the leaves are touched by an 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 up.

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. They 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.

STORAGE OF 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.

READ THESE DON'TS BEFORE YOU FAIL

YOU MAY THEN NOT NEED TO READ THEM AFTER.

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 rubber the screw-top.

DON'T shorten the time of sterilization until you have become familiar with the process.

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 rhubarb or some such easy keeping product 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.

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 pumpkin in a cool cellar. They will keep better in the attic.

Don't forget to watch your storage room and sort out any 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 and where the greatest amount of air circulation takes place.

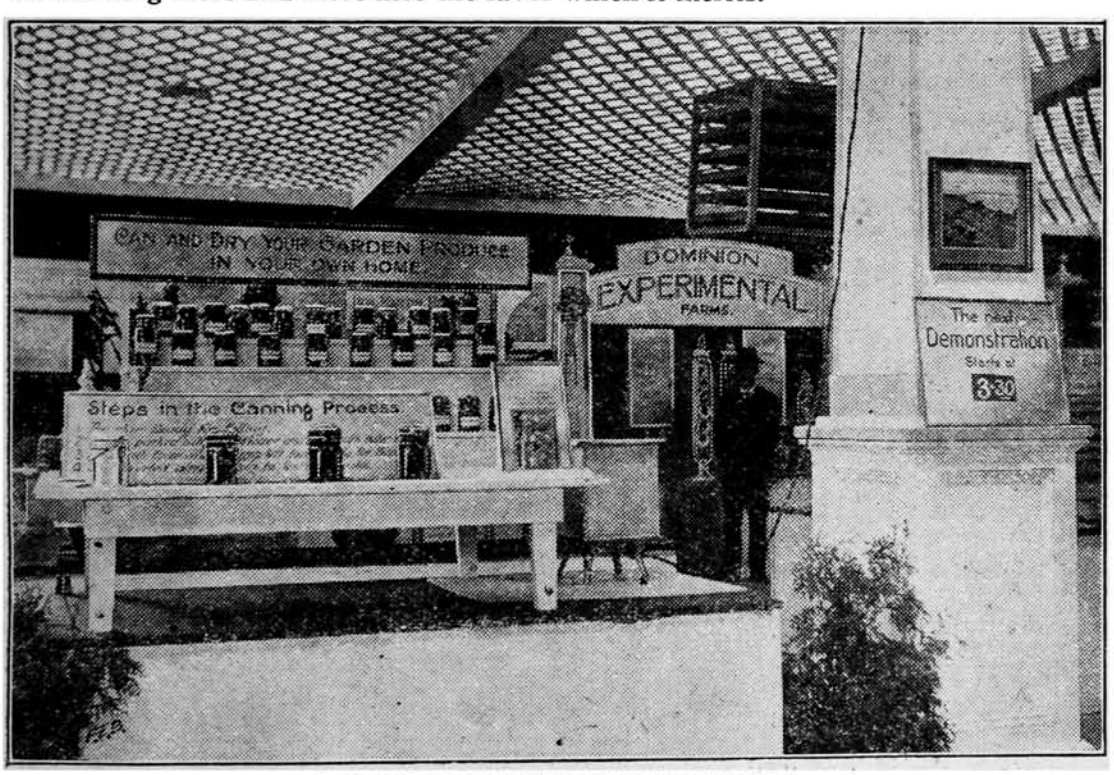
COST OF FUEL AND CANNING SUPPLIES

The question has been asked, "What are we going to do with the garden crops after we get them?" and also, "How are we going to get the most out of them?" The answer to these two questions is that every individual who grows crops must also save them by the most practical methods. The most practical methods of saving many of the garden crops are by canning and drying.

Last year a few people were discouraged from doing much canning work owing to the extra cost of jars. This year canning supplies may be even a little more expensive. The extra cost on each individual can of produce, however, will not be more than several cents, and if we do not can our own produce and are compelled to buy it at the store, probably the extra store price will be several times that sum.

There is, however, another consideration. It can be shown that with coal at $10 per ton, it costs 5 cents to cook six large beets as taken from the cellar storage. With an equal bulk when the beets are young and small they can be canned at a cost of 2 cents for fuel. In addition to this, as pointed out on another page, these young beets are superior in quality and flavour to the older beets. This saving in the cost of fuel applies to nearly all the stored root crops. Any investment, therefore, in canning apparatus, jars, etc., may prove to be decidedly profitable, when the saving of cost of fuel and of canned goods, which would otherwise have to be bought at the store, is taken into consideration.

Those who do not feel that they can afford, this year, to purchase additional jars, etc., for canning need not be discouraged. By following the simple directions given in this book, they can dry vegetables at only a small expense and they will find the dried product entirely satisfactory. Drying of vegetables no longer is an experiment but a proved, efficient and economical method of handling fruit and vegetables. It is coming more and more into the favor which it merits.



CAN OR DRY YOUR GARDEN CROPS
A display of products canned by the "Cold Pack Method," Home dried products and driers made for use in the home were also a feature of this display.

"AT A GLANCE" CANNING CHART

CANNING FRUITS:	Blanching	Sterilizing		Remarks
		Hot water	Steam 5 to 10 lbs. pressure	
	Minutes	Minutes	Minutes	
Apples	1 to 2	20	10	
Berries		12	8	Strawberries 8 and 6 minutes.
Cherries		12 to 15	10	
Currants		12 to 15	10	
Gooseberries	1 to 2	12 to 15	10	
Peaches	1 to 2	12 to 15	10	
Pears		20	15	
Plums		12 to 15	10	
Rhubarb	1 to 3	20	15	
Fruits without sugar		30	15	
CANNING VEGETABLES:				
Asparagus	5 to 10	120	60	Blanch the tough ends longer.
Greens	15	120	60	Pack tightly in jars
Beets	5 to 10	60 to 90	40	About size of small egg.
Cauliflower	3	60	30	Soak in cold brine for one hour.
Carrots	5	60 to 90	40	Small size.
Corn	5 to 10	180	120	Cut from cob.
Parsnips or Salsify	5	90	60	
Peas	5 to 10	120 to 180	60	Remove any split peas.
String Beans	6 to 10	60 to 120	60	Whole or cut in pieces.
Tomatoes	1 to 2	20 to 30	15	Whole or in pieces.

Times are for pint or quart jars. Quart jars should have the full time.

Where the steam pressure runs up to 20 or 30 pounds the time should be reduced to about two-thirds of that given.

"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.

CHERRY MOCK OLIVES.—Select large ripe cherries and pack with their stems on into sealers. To a quart jar, add 1 tablespoon of salt and fill to overflowing with liquid of equal parts of water and vinegar. These require no cooking and are ready for use in a few weeks.

"AT A GLANCE" DRYING CHART

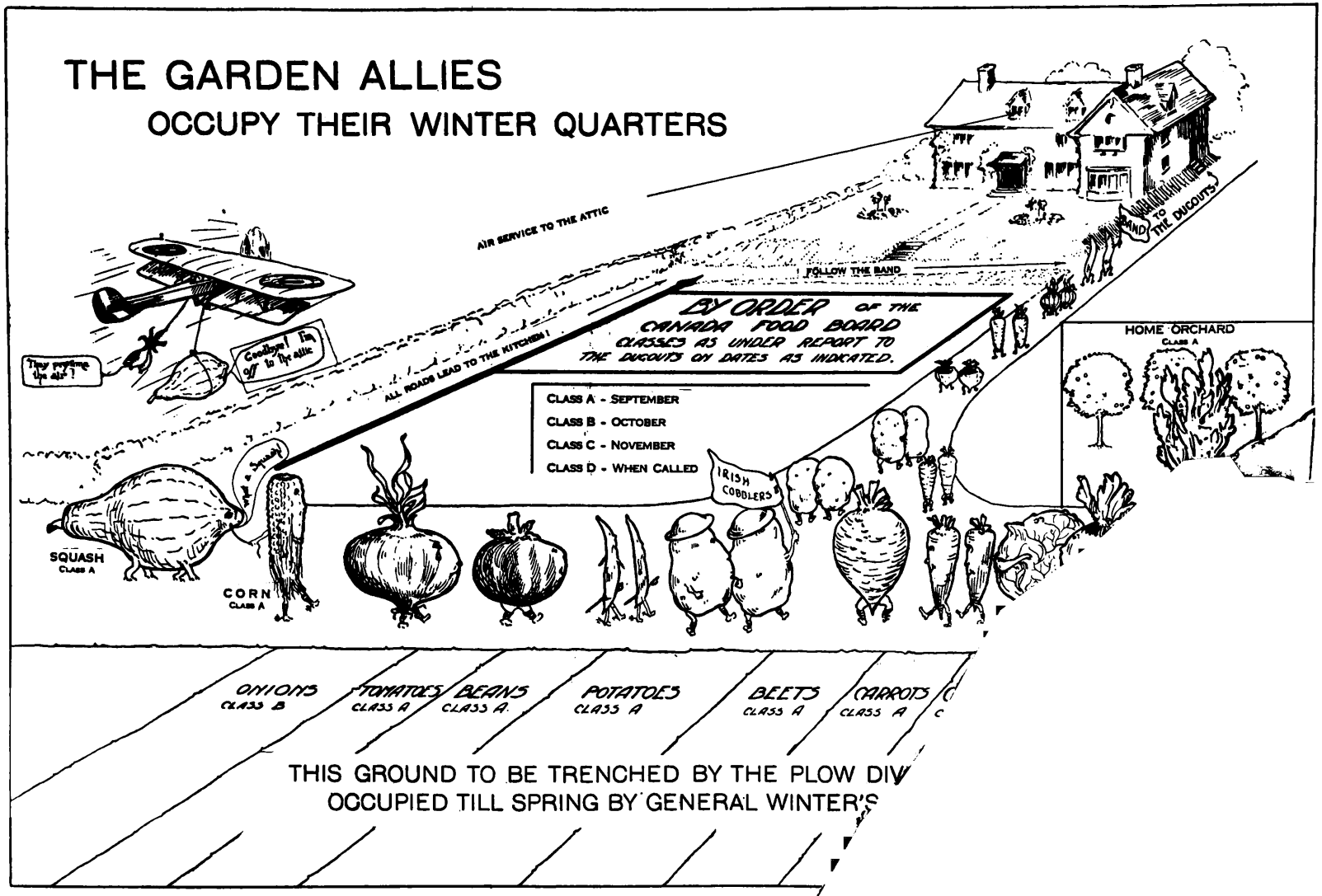
DRYING FRUITS:	Blanching	Drying	Temperature
	Minutes	Hours	
Apples	....	5 to 6	115 to 150
Berries	....	4 to 5	115 to 140
Cherries	....	3 to 4	115 to 150
Peaches	....	5 to 6	115 to 150
Plums	....	5 to 6	115 to 150
DRYING VEGETABLES:			
Beets	Till skin cracks	3	115 to 150
Brussels Sprouts	6	3 to 4	115 to 140
Cabbage	10	3 to 4	115 to 145
Carrots	6	3	115 to 150
Cauliflower	6	3 to 4	115 to 145
Celery	3	3 to 4	115 to 140
Corn	5 to 10	3 to 4	115 to 145
Green Pod Beans	6 to 10	3 to 5	115 to 145
Onions	5	3 to 5	115 to 140
Parsnip	6	3	115 to 150
Peas (Garden)	3 to 5	4	115 to 145
Spinach and Greens	....	3 to 4	115 to 145

It is impossible to give the exact times required to dry products. Those given above are approximate. Much will depend upon the style of the drier used.

The following uniform booklets, have been prepared by experts under the direction of the Canada Food Board:

1. **Fruit and Vegetables: Canning, Drying, Storing**
2. **Fish Recipes**
3. **Vegetable Recipes**
4. **Bread Recipes**

Copies of any of these booklets can be secured at a price of 5 cents each, upon application to the Canada Food Board, Ottawa.



From a sketch by MR. F. E. BUCK, Assistant Dominion Horticulturis

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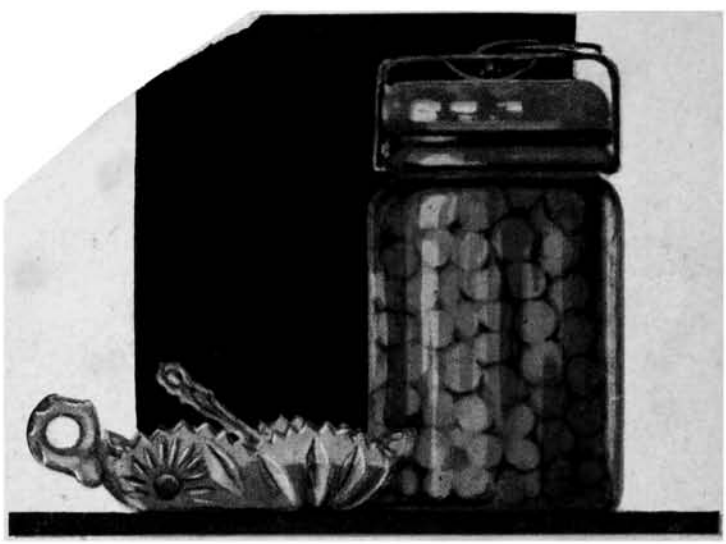

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