FOOD CONSERVATION
and
THE ART OF HOME CANNING

A Guide
FOR THE HOUSEWIFE

By
MRS. SHERWOOD P. SNYDER

EVERY WOMAN WHO CANS FOOD
IS DOING AS MUCH FOR
THE CAUSE OF DEMOCRACY
AS THE MAN WHO FIGHTS


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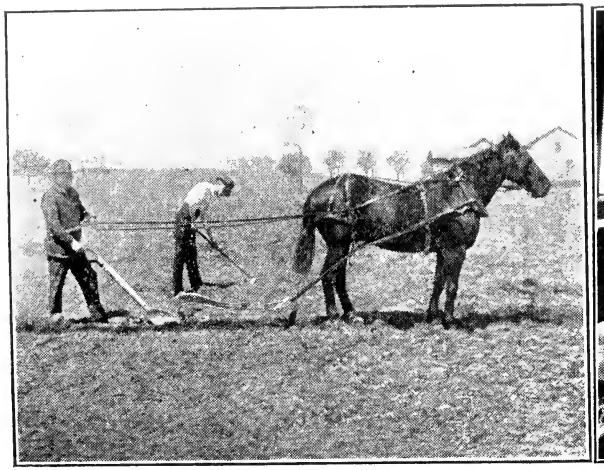
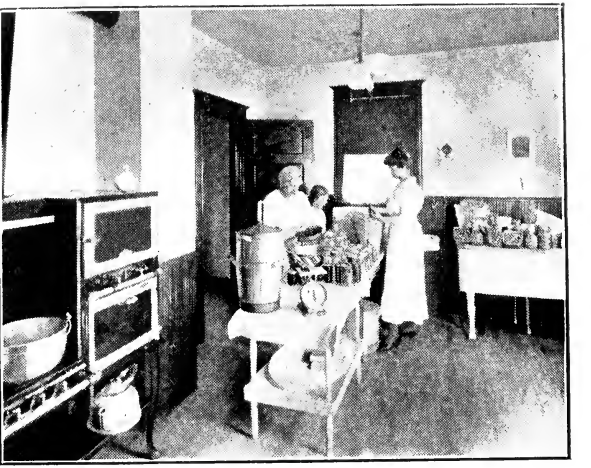


PREPARING THE SOIL FOR SEED



SAVING THE HARVEST

A TREATISE ON

FOOD CONSERVATION

AND

THE ART OF CANNING

BY

MRS. SHERWOOD P. SNYDER

Author of "The Art of Candy Making"

HEALTH PUBLISHING CO.

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DEDICATED

TO THE

AMERICAN HOUSEWIFE

FOOD IS AS IMPORTANT AS POWDER

The war must be won by hard fighting, but men can't fight hard or long on empty stomachs.

Every can of food put up by the American housewife increases our chances of victory.

Men must shoulder their rifles and women must shoulder the responsibility of helping to feed them.

Every one should offer life or labor for the defense of his country.

Victory depends upon home forces as much as upon field forces.

Battalions of men must engage the foe and battalions of women must engage the harvest when it arrives.

Hungry armies means lost freedom.

Will you contribute to the world's food supply or will you devour the substance of others?

Plenty of food and powder will give us victory in the end, but a deficiency of either means a lost cause.

Will you wait until the harvest is past and then lament that you lost your opportunity to help?

Cheering the flag is poor patriotism unless backed by hard work and hard fighting.

The farmer will raise the crops but the women must help to preserve them.

Will you waste your time in idleness this summer while foods perish and children starve?

Every can of food you put up is a noble contribution to the cause of liberty.

PREFACE

For the information in this book the author and compiler claims only partial credit. The instructions and recipes have been gathered from various reliable sources. The methods advocated herein are the same in principle as those published from time to time by the U. S. Department of Agriculture, and the various State Colleges. If the instructions given are obeyed and the recipes followed, the housewife will find herself able to preserve in jars all foods that are ordinarily canned by the commercial canneries.

There must be no haphazard guesswork in connection with canning foods. Everything must be done by rule. To disregard the instructions given may cause complete failure, which means wasted effort and lost material.

The canning of vegetables in the home is thoroughly practical; the various operations are easy and simple. The housewife will find that it does not require an undue amount of effort during the summer months to store in cans nearly all the vegetables required for winter consumption. Under ordinary conditions, when the prices of canned foods are normal, the economy of such work is doubtful, but at this tragic period in the world's history, when millions are suffering to the point of starvation, to help preserve every pound of food produced is an obligation everyone owes to humanity.

The author insists that it is necessary that the general directions on canning be read before proceeding with the canning of vegetables, fruits or meats.

INTRODUCTION

The object of this book is to assist every earnest woman in her effort to do her part in this time of hunger and want.

Canning foods in the home has become practically a lost art. The large canning factories with our modern means of transportation have in a large measure relieved the housewife of the necessity of making ample provision during the summer months for the winter supply of foods.

The canned goods from the groceryman's shelf have been so satisfactory that the housewife has gladly welcomed the relief from this duty that our grandmothers performed so diligently.

At this period we face a tragic condition of affairs, a condition which will require the combined efforts of all the liberty loving people of the earth to correct.

Every man and every woman should prepare for action, and in no other field can the women of the world direct their energies to greater advantage than in the preventing of a food shortage. To accomplish this end miniature canning factories must be established in millions of homes. Women must become familiar with the secrets of the commercial canneries. They must know not only how to can fruits, but how to put every sort of perishable food product in cans and have it keep until the proper time comes for its consumption.

A little more than one hundred years ago a Frenchman, Nicholas Appert, discovered how to preserve foods by sealing them hermetically and heating to the point of producing complete sterilization. In 1811 he published the first book on the subject, "The Art of Preserving Animal and Vegetable Substances."

In 1820 Charles Mitchell and William Underwood, two Englishmen, who had worked in a canning factory in England, opened a canning factory in Boston where they canned only fruits. At that time glass was used almost exclusively, and it was not until 1825 that Thomas Kensett secured a patent for the use of tin cans. From that time on the canning business steadily increased until to-day a large proportion of our food is transported to us in tin cans.

Canning foods is without doubt the most practical and healthful means of preserving perishable food products for winter use. By this means we are enabled to secure at any season of the year vegetables and fruits that are not inferior to the harvest fresh from the fields and orchards.

At this age when people are gathered in large industrial centers, the problem of food distribution and feeding would be most difficult, if not wholly impossible, were it not for this means of preserving foods which to us seems so very common and yet in reality is so wonderful.

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PRODIGIOUS WASTE

Every summer enough garden truck goes to waste to fill millions of cans. A similar loss will occur again this season unless the American housewife goes into the canning business with a will.

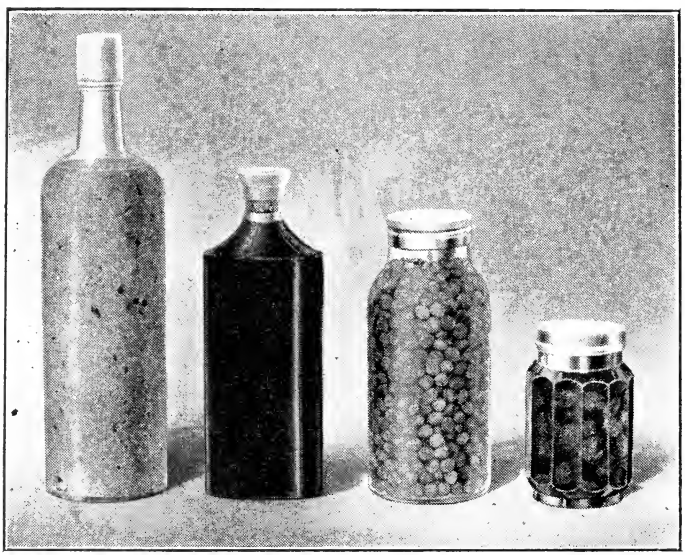
Now that food prices are on a rampage and a great food shortage threatens the world, it is to be hoped that every woman will fill every can, bottle and jug in her possession with some food product, in order to curtail the prodigious waste that ordinarily occurs.

Only with the willing help of the women can ample provision be made to feed a hungry world next winter. That women will do their part with a willingness that only women can manifest there is no question.

By systematic, intelligent effort, and with but little expense entailed, the enormous dead loss that would otherwise occur can be turned into a live profit; and by this means, through lessening the demand, prices will be held to a more normal basis.

Surely every woman of America is filled with enough patriotism to realize that upon her rests a portion of the responsibility of contributing to the country's food supply.

Resolve to can every pound of surplus foods that you can secure, and thereby make certain that at least your family will not be counted among the hungry next winter, and to this will be added the satisfaction of not having to draw upon the general supply, all of which will be needed if our soldiers and our allies get the supplies they should.



A quart whiskey bottle, a medicine bottle, a mustard jar and a cold cream jar filled with fruits and vegetables.

Every can, every bottle, every jug should be filled this summer.

CANNING OUTFITS

There are on the market various canning outfits made especially for home use or for the farmer who desires to can his surplus produce for commercial purposes. The style to buy, of course, must depend to some extent upon the amount of canning one expects to do. For the housewife, who intends to can foods only for family use, the ordinary water bath or water-seal canner that will hold from eight to fifteen quart jars at one time, is of sufficient size. In buying a canner it is well for the housewife to select a make that will serve the purpose of a steam cooker as well as a canner. The author has in her kitchen a regular round steam cooker to which she has had a thermometer attached. (The use of a thermometer that will register the number of degrees to which the heat in the canner will rise is absolutely necessary for canning purposes.) To attempt to can vegetables without a thermometer on the canner is simply guess work and invites failure. If those who are interested in securing such a cooker, and having it equipped with a thermometer for canning purposes will send an inquiry to the HEALTH PUBLISHING COMPANY, BINGHAMTON, N. Y., the desired information will be given. Through the U. S. Department of Agriculture it is possible to secure the addresses of the various companies manufacturing home canning outfits.

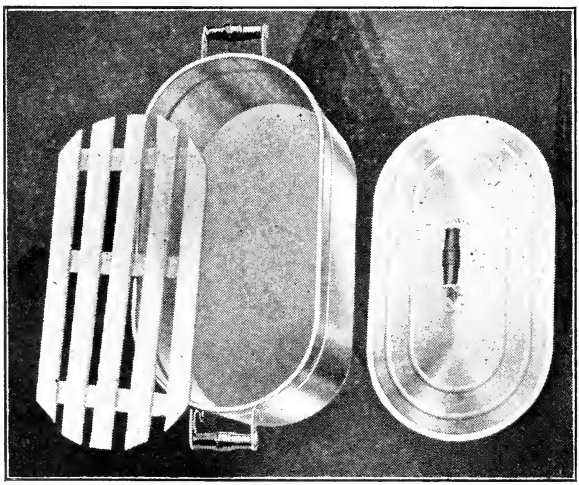
This steam cooker has been in service for seven years. Attaching a thermometer has converted it into a splendid canning outfit. It accommodates 8 quart jars and is simple and easy to operate.

The Steam Pressure Canner

The steam pressure canners are made especially for the purpose of canning, and while some are of a size enabling one to make them serve the purpose of a steam cooker as well, they are somewhat cumbersome for daily use. They are adapted for the purpose for which they are especially intended, and they have a point in their favor if they are to be employed entirely for canning purposes, in that foods cooked under steam pressure are sterilized in a shorter period than when cooked at the boiling point. The various domestic steam pressure canners on the market are built to carry from five to fifteen pounds of steam, and of course the greater the steam pressure the higher the degree of heat. The use of a steam pressure canner shortens the cooking period, which is a big item to the canning factory, if not to the average housewife who is not required to work with the same degree of haste.

Hot Water Bath Canners

The hot water bath canners are in principle the same as the wash boiler. The cans are submersed in the water, and the water is kept boiling the required length of time. The water bath canners have some advantages over the wash boiler or the lard can, in that they are more convenient and not so cumbersome.



There must be a false bottom placed in the bottom of the boiler on which to set the jars, and the jars must be placed upright.

The wash boiler should be pressed into service if a more convenient outfit is not obtainable.

A thermometer is not necessary when the hot water bath is employed.

The Washboiler

The washboiler has been converted into a canner by many women who have made a practice of canning their own vegetables. It is somewhat unwieldy, and makes the task of canning more difficult than it would be with convenient equipment; but it serves the purpose and if financial conditions do not warrant the cost of a canner of a more convenient type, the washboiler should by all means be used.

A false bottom consisting of wooden slats, or a perforated sheet iron disk must be placed in the boiler on which to place the cans. This false bottom must admit of the free circulation of the water under it. The cans are arranged on this false bottom to prevent breakage. If the cans were set directly on the bottom, the friction of the boiling water would result in a great percentage of broken cans.

How to Operate Hot Water Bath Outfit

The hot water bath outfit may consist of a wash boiler, a lard can with a tight fitting lid, or one of the commercial types. If a commercial outfit is purchased full instructions will accompany it. If the wash boiler or a lard can are pressed into service, carefully observe the following rules.

Place a false bottom of wooden slats or perforated

metal in the bottom of the boiler on which to set the cans.

See that the water comes at least one inch above the tops of the cans. If the cans are not covered, loss of liquid during the period of sterilization will result.

Do not put cans filled with warm material and boiling water into cold water. Have the water in the boiler warm. Count the time for sterilizing from the time the water begins to boil, and not from the time the cans go into the boiler.

Place each jar in the boiler as it is packed.

If a gas stove is being used, place the boiler so that each end is over a lighted burner if the boiler is long enough to cover two.

Keep the cover of the boiler closed tight during the processing period.

Turn the fire out a few minutes before lifting the jars from the water.

Don't waste fuel in heating fresh water every time; the same water will do all day by simply adding to it from time to time.

Seal the jars tight as soon as they are taken from the water.

A Wire Spring Jar Partially Sealed

Never seal a glass jar perfectly tight before sterilizing. The above cut illustrates the partially sealed wire spring jar. When using a screw top jar put the rubber on and turn the lid down so it presses slightly against the rubber.

GLASS JARS

While the tin can is the receptacle favored by the canning factories for the purpose of preserving food for market purposes, the conditions in the home are so different that the glass jar is the more desirable for the housewife who cans foods only for home consumption. The product of the canning factory must find its way to the markets, often thousands of miles from the place where it was produced, and the indestructibility of the tin can reduces losses from breakage to a minimum; whereas if the glass jars were used, the caution required in packing, the breakage that would be inevitable, the extra weight of the glass, would raise the price of canned products to a point far beyond that charged for goods canned in tin.

The glass jar is the logical container for the housewife. These jars can be emptied and re-used from year to year until by some mishap they are broken. The rubbers for these jars must be purchased new each season, and if the jars have metal tops they will sometimes require replacing; but the jar remains serviceable so long as it remains unbroken. Glass jars have been used for thirty consecutive years, being emptied and then refilled every season. The average life of a glass fruit jar in the home should be from seven to ten years. It will be readily seen that with care glass jars cost less in the

long run than tin cans, and one is relieved of the trouble of purchasing cans each successive season.

There are three varieties of glass jars commonly in use—the screw top jar, the wire spring jar, the suction-top jar. The style of jar to be used must be left to the housewife.

Each style has practically the same advantages so far as success in keeping food is concerned. It is largely a matter of choice and the housewife will naturally select the type with which she is most familiar. If there is a preference it is in favor of the wire spring jars.

Preliminary Heating of Glass Jars

Glass jars should always be put in water and brought to the boiling point and held there for a period of thirty minutes, or they should be put into the canner and heated for the same period of time. This accomplishes two very important things: it makes the cans sterile and it tempers them, which prevents breakage. To use new cans without first subjecting them to this tempering process usually entails a high percentage of broken jars. Wash the jars and rinse them. Put them into the canner, whether it be a steam or hot water bath outfit. While the cans are being sterilized and tempered, prepare enough of the material to be canned to fill all the jars. At the end of thirty minutes, or as soon thereafter as the material is ready to put into the jars, take the

jars from the canner and immediately fill them, as per instructions. This operation is simple and easy, and if neglected for any reason, after the cans have been filled and cooked, broken jars will very often be the result.

HOW TO FILL CANS OR JARS

Cans should be filled as full as they can reasonably be packed, and successfully processed, except with the following vegetables—corn, hulled beans, peas, sweet potatoes, squash, and pumpkin. These vegetables swell slightly during the process of sterilization and if the jars are entirely filled, there is danger of breakage. With these vegetables fill the cans to within two inches of the top and fill with water. In this way broken cans will be avoided, and the food will not rise above the surface of the liquid. Most other vegetables will shrink slightly during the processing and it is therefore desirable to fill them well, but always see that the food is completely covered with water before the can goes into the sterilizer.

For small vegetables, as corn, peas, shelled beans, etc., a funnel with a wide neck which will just fit into the neck of the jar is a great convenience in filling the jars. It is also very serviceable when filling jars with small fruits or liquids.

As soon as the jars are filled with the product, add the amount of salt the recipe calls for and then fill with boiling water. Immediately put the lids in place and partially seal, when the jars are ready to go into the sterilizer.

RUBBER BANDS

Too much emphasis cannot be placed upon the necessity of good quality rubber bands for glass jars. Companies which use glass jars in canning for commercial purposes recognize the fact that whatever other precautions are taken, the risk of loss is great unless rubber bands that insure a perfect seal are used. Some women are in the habit of using rubbers saved from the cans opened the preceding winter. To do so is false economy, for the loss from defective rubbers is infinitely greater than new rubbers would cost. New rubber bands of good quality should be purchased each season. and in no case is it advisable to risk using old rubbers or new ones of inferior quality. The rubbers when purchased should be elastic and strong. They should be uniform in thickness and width. The color has nothing to do with the quality. If you purchase a certain brand of rubbers and find them to be of first quality, it is advisable to continue purchasing that brand so long as the quality remains satisfactory. The necessity for using good rubbers is obvious. Any rubber having a flaw that will permit air to come in contact with the contents of the can, no matter how slight the amount may be, is a faulty rubber. A woman may be ever so particular in all other operations connected with canning, but if defective rubbers are used, spoiled foods will be the result.

THE USE OF TIN CANS

For anyone who contemplates operating a canning business in a commercial way, the tin can is the logical solution if the product is to be shipped farther than the local market. Another item to consider is the cost of glass jars over tin cans. When the glass jars can be repeatedly used, as they can be by the housewife, the jars have every advantage; but where the product is sold and the cost of the can must be included in the selling price, the receptacle that costs least, so long as it is of good quality, lends itself better to market conditions unless one is catering to a very exclusive trade that is willing to pay the extra price that must be attached to food put up in glass jars.

Because of the action fruits and some vegetables have upon tin, the enamel lined or lacquered cans should always be used. To use cans made of ordinary tin plate is unsafe. The metallic poison developed by the action of the food upon the tin is dangerous to life. It is a very grave mistake to eat food when there is evidence from the appearance of the inside of the can and the taste of the food that the tin lining has been dissolved by the action of acids.

Some women are careless enough to open a tin can, empty a portion of the food for immediate use and allow the remainder to stand in the can until the following

meal or even the next day. Such an act expresses glaring ignorance or carelessness on the part of anyone. As soon as a tin can is opened and the air comes in contact with the contents of the can, chemical action begins if any acids whatever are present, and the food soon becomes unfit to eat and harmful to health. Empty the food in tin cans into some earthen, glass or porcelain lined vessel as soon as the can is opened.

There are five standard sizes of tin cans used in the canning factories. They are numbered as follows: No. 1, No. 2, No. 2½, No. 3, No. 10. The No. 3 can is nearest in size to a quart jar and is most practical for home use unless the family is small, when the No. 2 cans will be found desirable.

How to Cap and Tip a Tin Can

The following instructions were taken from a booklet published by the Northwestern Steel & Iron Works, Eau Claire, Wis. This company makes various styles of steam pressure canners.

The U. S. Department of Agriculture furnishes splendid and complete instructions for capping and tipping tin cans. Ask for Form NR-22.

How to Cap a Tin Can

The standard packers' tin is made with a circular

opening in the top for filling purposes and is furnished with a cap (sometimes called cover or lid) which has sufficient solder already attached for sealing. In the center of the cap is a small hole, called the vent hole or tipping hole. When ordering these cans, it will be necessary to specify "solder-hemmed caps."

After the can has been filled, place the cap over the opening; apply the soldering fluid or flux with a small brush, and with a hot circular steel called a "capping steel," that fits over the cap, melt the solder (if it is a "solder-hemmed" cap). Plain tin caps are not solder-hemmed, and it is then necessary to use wire solder. Touch the upright steel with the solder. If the steel is sufficiently hot, and properly tinned, the solder will instantly melt and fill the groove in which the cap fits. Turn steel around two or three times; press down on the rod that runs through the center of the steel, which is sufficiently long to allow the steel to be raised from the cap before removing the pressure. Lift the steel for an instant before removing the center rod from the can. This allows the solder to set or cool. Be sure to set the cans on a level surface or all the solder will run to the lowest side.

Sanitary cans come to the operator with the entire top off. After being filled, the overlapping top is crimped and rolled steam tight, no solder or flux being necessary. This requires a special machine known as the "double seamer." On account of the high price of

these machines, it is not practical to use them unless at least 5,000 cans per day are being turned out.

How to Tip a Tin Can

After the tipping copper (commonly called "soldering iron") has been heated, apply flux around the vent hole and place the end of the copper in it. Touch lightly with wire solder held in the left hand. Give the copper a quick turn and remove quickly. (It is necessary that the copper be filed to a point.) Use no more solder than is necessary to fill the hole so it is level with the top of the cap.

After removing either the capping steel or tipping copper from the fire, be sure to dip them into a solution consisting of one part powdered salammoniac and six parts of water. Be very careful not to heat either copper or steel too hot, as this will burn off the tin and compels one to go through the operation of retinning before using again.

How to Tin a Tipping Copper

After heating the copper hot enough to melt the solder (being careful not to over-heat and burn the copper) remove from fire and with a coarse flat file, work the copper down to nearly a sharp point. Be sure to take off every particle that shows the copper to have been burned. Take a lump of salammoniac (or powdered

salammoniac), make a hole with the hot copper in the salammoniac and put in two or three drops of solder. Rub the copper, turning from one surface to another until it is "tinned" or bright on all surfaces. It is then ready for use. It is necessary to repeat this operation only when the copper has been heated too hot and the tin burned off. By carefully watching the fire, you will eliminate the necessity of repeating this operation very often.

How to Tin a Capping Steel

Use powdered salammoniac in which sufficient solder has been placed to come up on the side of the steel, far enough to cover the lip of the steel. Heat the steel hot enough to melt the solder nicely and place it in the solder and salammoniac, turning a few times, and the trick is done.

Soldering Flux

To make the solder spread evenly, it is necessary to apply to the cans what is commonly called "flux" before soldering. For this purpose a small brush or piece of muslin attached to a small wooden handle is very convenient. Dip the brush into the flux, then pass it around the groove in the cap. You are then ready to use the capping steel.

FORMULA: Obtain a small quantity of crude muriatic

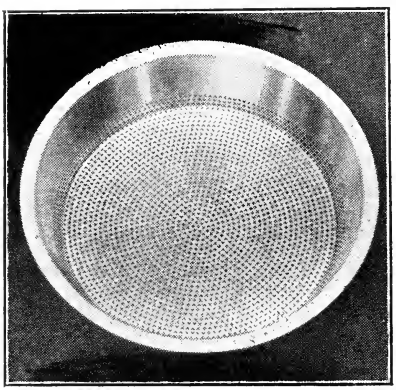
acid, place in a stone or glass jar, add a number of small pieces of sheet zinc until no more will be consumed by the acid. Let stand for at least 24 hours before using; strain through muslin, then dilute with water in proportion of one to one. When using, keep the flux well mixed. Prepared soldering flux may be purchased at hardware stores, canners' supply houses and sheet metal workers. Powdered rosin may be used if desired.

THE BEST UTENSILS FOR CANNING ACID FOODS

The use of tin and iron vessels when canning acid foods, making fruit jellies and jams, and making the various relishes should be avoided. The action of the acids on the tin and iron very often produces a metallic poison in the product. To retain any acid food in tin or iron receptacles for any great period of time is dangerous to health and life, and it is indeed careless on the part of any woman to show disregard in this respect. To allow food to stand in the tin can for any length of time after the can has been opened is carelessness which is inexcusable. As soon as the food comes in contact with the air the action of the tin begins, and the longer this action is permitted to continue the more deleterious the food becomes.

The best utensils for canning and preserving purposes are good quality enameled and aluminum kettles. The enameled utensils should be perfect—no flaws should show in the enamel lining. Checked or chipped enameled utensils are among the most dangerous to use. Good aluminum utensils are always desirable; however, foods containing a strong acid should be removed to earthen or glass receptacles as soon as taken from the fire. Strong acids and alkalies act on aluminum. It has not been proven that the product of this action is

harmful, but it is not in any way beneficial to the food or to the utensil, and it is advisable to empty such foods from aluminum when they are taken from the stove.



This puree sieve has over 2500 perforations. The holes extend up the side ½ inch. A gallon of fruit or vegetables can be pressed through this sieve quicker than a pint of the same food can be pressed through a colander. It is an indispensable utensil.

A FEW OF THE ESSENTIALS FOR SUCCESSFUL CANNING

1. A complete knowledge of all the operations necessary in canning, or a book of rules and recipes by which to be guided.
2. Confidence in your ability to do the work according to rule.
3. A reliable clock in a convenient place, and a pencil and pad nearby on which to mark the time.
4. A pair of accurate scales which will weigh from 1 ounce to 10 pounds.
5. Plenty of pans, pails and kettles.
6. At least three gas burners or a similar amount of room on another stove.
7. Facilities for plenty of hot and cold water.
8. Glass jars with screw tops or spring wire fasteners, or tin cans, and the equipment necessary for capping and tipping the tin cans, if they are used.
9. Store cans in a dark place, or wrap in paper, to avoid bleaching.

A Few Handy Implements

Sharp paring knives, sufficient in number so that if one is mislaid another is within easy reach.

A puree sieve through which can be pressed tomatoes

to remove the seeds, fruits for making sauces, vegetables for making cream soups.

A perforated dipper of large size.

Plenty of cheesecloth in which to tie the products to be canned when blanching and cold dipping them.

A perforated spoon.

A large-mouthed funnel.

Asbestos lifters with which to handle hot kettles and cans.

Plenty of clean towels.

Several long-handled wooden spoons.

A skimmer.

Storing Canned Goods

A fruit cupboard in a dry cellar or in a cool, dark room in which the temperature never falls below the freezing point is the best place in which to store filled cans. All light should be excluded, and it is advisable to wrap glass jars in paper. Inspect glass jars occasionally and if any show signs of spoiling open immediately, heat and use.

THE ARRANGEMENT OF THE KITCHEN

The woman of forethought, before she starts her canning operations for the day, will arrange her kitchen furniture so that the greatest amount of work can be accomplished with the least amount of effort and worry. Often brains can be used with smaller cost of energy than can hands and feet. The difference between using brains and not using brains is the difference between pleasure and drudgery. Don't make a hundred steps where ten would suffice if things were twisted and pulled into order. The tables on which the fruits or vegetables are to be prepared should stand near the sink where the jars are washed. One table should have a drawer in which to keep knives and spoons not in use, and by all means have plenty of table room. A high stool on which to sit whenever possible is another essential. Have the salt and the sugar on the tables. If possible have the line of tables running between the sink and the stove, so the operations are in one direction. Have a large container under the tables in which to put the discarded portions of the products being canned.

Systematize your work so that every motion and step counts. It is not difficult for a woman to can at least fifty quarts in a single day, and do it with ease. Set apart days especially for canning, and purchase products in quantities. In this way double the amount of work is

accomplished in a given time. To put up a quart or two to-day, two or three quarts tomorrow, one the following day, is time uselessly wasted. The canner should never go on the stove unless it is entirely filled. As much gas is used in sterilizing one quart as eight quarts.

THE OPEN KETTLE METHOD OF CANNING

A great many women still employ the old open kettle method in all the canning they do. The fruit or vegetable, as it may be, is cooked in the kettle and then put into the cans and sealed. Nearly all fruits, tomatoes, and rhubarb may be canned with a great degree of success in this way, although it is not the surest and most practical method. All the foods containing acids which aid in the sterilization lend themselves to this old-fashioned method. The degree of sucess a woman will have when employing the open kettle method depends largely upon the condition of the product before cooking and the care taken to avoid contamination. After the product is cooked for the required length of time it should be put into sterilized heated jars at once, while it is still near the boiling point. The jars should be sealed immediately upon being filled. To sterilize the jars put them in cold water and bring them to the boiling point. Keep them at the boiling point for thirty minutes. Remove them from the boiling water one at a time as they are being filled. In no case allow the fingers to touch the inside of the jars or the lids. All utensils used in filling the cans must be sterilized to avoid introducing bacteria into the cans. These precautions may seem entirely unwarranted to the woman who does not understand Bacteriology, but bacteria are not respecters of

persons and they are always ready to inhabit any field open to them.

A woman will meet with little success if she attempts to can any vegetables except tomatoes by this method. In fact, it is just a waste of time and foods to undertake it. The bacteria peculiar to such vegetables as corn, peas, beans, greens, and other garden truck, resist any ordinary amount of cooking, and the only sure method is to first put the food into cans and then process it at a given temperature for a period of time sufficient to guarantee complete sterilization.

THE COLD-PACK METHOD

The cold-pack method of canning which this book teaches has proven to be the simplest, most practical and surest method discovered. The cold-pack method is being taught in nearly all our Agricultural Colleges. It is advised by the U. S. Department of Agriculture. It is in every way superior to other methods formerly in vogue.

Cold-pack method means raw-pack. It means that the food is placed in the cans in a raw or semi-cooked state, instead of being cooked in an open kettle and then transferred to the cans. The old method of first cooking food and then putting it into the cans was too uncertain. The chance of live bacteria getting into the cans before they were sealed was too great. The food lost some of its flavor and depreciated in appearance. By the cold-pack method all the flavor of the food is retained and the work is simplified and greatly lessened. The chance of bacterial contamination is removed.

There are five steps in the canning of foods by the cold-pack method—cleaning the product to be canned; blanching and cold dipping; packing the food in the jars; sterilizing by continued cooking for the correct period of time; finally, sealing the cans. While these steps vary somewhat according to the product that is being canned, the principle is the same, and the house-

wife should fix them thoroughly in her mind before proceeding with her work. The rapidity with which these steps are taken has something to do with the quality of the finished product and also greatly increases the output of a single day.

Blanching and Cold Dipping

Blanching and cold dipping vegetables and fruits when following the cold-pack method is absolutely essential. To disregard these operations is to invite disaster. The blanching must be done for the three following reasons: (1) It eliminates objectionable acids that may cause soured cans, and removes undesirable acrid flavors. (2) It wilts the product, which reduces the bulk and prevents undue shrinkage after the food is sterilized. (3) It makes it unnecessary to use the exhaust period and the intermittent process. There are four particular reasons for cold dipping. (1) The extreme change from hot to cold assists in sterilization. (2) It makes the pulp firm, which enables one to remove the skin without undue injury to the appearance of the product. (3) It fixes the coloring matter and prevents cloudiness of the liquid in the cans. (4) It makes the product easier to handle when putting it in the cans.

THE NUMBER OF QUARTS IN A BUSHEL

The following table gives approximately the number of quarts in a bushel of the following fruits and vegetables. The amount discarded in preparation and the amount packed in each can will cause the number of cans obtained from a bushel to increase or decrease accordingly.

Apples	20 quarts
Apricots	20 quarts
Beans, Green (shelled)	30 quarts
Beans, String	20 quarts
Blackberries	26 quarts
Cherries	24 quarts
Corn	25 quarts
Currants	25 quarts
Gooseberries	25 quarts
Grapes	22 quarts
Huckleberries	28 quarts
Peaches	18 quarts
Pears	25 quarts
Peas	10 quarts
Plums	25 quarts
Pumpkin	18 quarts
Raspberries	25 quarts
Strawberries	26 quarts
Squash	18 quarts
Tomatoes	15 quarts

ALTITUDE

It must be borne in mind that the greater the altitude the lower the boiling point of water, and changes in the period of sterilization must be made accordingly if the hot water bath or water-seal outfits are being used. With steam pressure outfits it makes no difference as steam under pressure is not affected by altitude and the temperature is the same anywhere.

The U. S. Department of Agrictulture advises that for every 4,000 feet increase in altitude that it is well to add 25% to the time given in recipes when 212 degrees, the boiling point at sea level, is used as a basis.

The following table gives the approximate temperature at the various altitudes and will serve as a guide for the various sections of the country.

Sea level.....	212 degrees F.
500 feet above sea level.....	211 degrees F.
1000 feet above sea level.....	210 degrees F.
2000 feet above sea level.....	208 degrees F.
3000 feet above sea level.....	206 degrees F.
4000 feet above sea level.....	204 degrees F.
5000 feet above sea level.....	202 degrees F.
6000 feet above sea level.....	201 degrees F.
6500 feet above sea level.....	200 degrees F.
7000 feet above sea level.....	199 degrees F.

There are in this country very few points just at sea level, which means that there are only few sections where clear water boils at exactly 212 degrees. Before beginning canning operations, the altitude of the locality should be ascertained, or the boiling point should be ascertained by the use of a reliable thermometer. It is well to know the altitude unless the accuracy of the thermometer is certain.

A CRIME TO USE PRESERVATIVES AND CANNING COMPOUNDS

Through the free distribution of advertising matter in circular form and in newspapers a great many people have been led to believe that the proprietary canning compounds sold on the markets are practical and altogether safe. These compounds are freely used by many women who find it more convenient to resort to preservatives than to exercise care and cleanliness. If a woman is thorough in her work, and through exact rules accomplishes complete sterilization, she will find it entirely unnecessary to resort to chemicals, which the government forbids being used in commercial canneries. The first argument against them is that they are entirely unnecessary if exact methods are followed. The second argument against them is that many of them are positively injurious to health. Some of them contain as high as 90% of boric acid. Salycilic acid is another chemical commonly used and recommended by some women. To use such things in foods is positive proof that a woman is ignorant of the harmfulness of such products and careless, or uncleanly in her habits. For the sake of health any thoughtful woman will refrain from using preservatives in foods she expects to feed her family.

STERILIZATION IMPERATIVE TO SUCCESS

The preservation of foodstuffs lies in controlling the actions of microorganisms, of which there are many varieties, each capable of attacking all forms of food and causing its destruction unless their action is arrested and held in abeyance. In the air the presence of these microorganisms is constant, and any food left in a condition favorable to their growth will soon become infected by one or more of the many forms of decay. The presence of such bacterial growth is manifested by the appearance of mold, or by fermentation, or by what is commonly called a soured condition. The spores of these organisms are so minute that the action of the air keeps them constantly in motion, and because of their countless number no food can long remain unsealed without having gathered bacteria sufficient to start decay.

These various growths may be divided into classes, yeasts, molds and bacteria, any of which are so minute that they must be examined with the microscope in order to isolate an individual organism. Of these growths the yeasts are most easily handled as they quickly succumb to the action of moderate degrees of heat. Practically all of the molds and the bacteria reproduce themselves by means of spores, and unlike the yeast plant they are impervious to ordinary degrees of heat for a period of many minutes. To sterilize food by means of continued

heat sufficient to insure their destruction and then by sealing the food to avoid contact with others is the sole secret of canning.

In the process of sterilization no half-way business will suffice. The microbe, bent upon conquest and destruction, has little respect for guesswork, hope for good luck, or faith. It is absolutely necessary that each can be perfectly sterilized, or the food that was to give you nourishment on some winter day will be consigned to the garbage can, and all your work will have been in vain. Unless a woman will familiarize herself with all the necessary steps essential in successful canning, her time in putting up vegetable and meat products is poorly spent. Her work must be guided by scientific methods, otherwise her efforts and the food put into the cans will serve no purpose.

The recipes in this book specify the number of minutes the food must be cooked to insure sterilization, according to the type of canner and the method employed. The time must be observed by the clock, and it is well to mark it down to avoid mistakes.

FLAT SOUR

The condition called "flat sour" is caused by allowing vegetables to stand too long after they are gathered. This condition is very apt to be found in corn, peas, or beans if they are allowed to stand in a large heap until they become warm. Vegetables that have become stale before being canned will sometimes develop "flat sour." It cannot be detected by the appearance of the contents of the can, but when the can is opened the odor and the taste exposes the spoiled condition. The best means of avoiding this misfortune is to procure only fresh stock, and can it at once.

THE CAUSES OF SHRINKAGE

Sometimes a can is not nearly full after it has been processed, or the water line is low. These results may be caused by careless blanching, careless packing, or processing for too long a period. Proper blanching wilts and shrinks the product, so that after it goes into the can the shrinkage is slight. If such vegetables as corn, onions, asparagus, peas, beans, etc., are packed and no allowance for water is made, when the can cools the water will settle and a portion of the vegetable will remain above the liquid. If the cans do this there is no occasion for alarm. The product will keep just as well, but when the cans are opened the portion above the liquid will not be quite so nice as the remainder.

WHY SOME VEGETABLES TURN DARK

If the water used contains too high a percentage of minerals the vegetables will sometimes turn an unattractive dark color. This can be avoided by the use of soft water. This trouble will not be experienced in very many localities, but where it is, the only recourse is to obtain pure, soft water.

Processing corn under steam pressure at a high degree of heat and then neglecting to cool it partially as soon as it is taken from the retort is another cause for corn turning dark. Trouble of this nature will not be experienced in the home where the hot water bath, or the water-seal process is used. In these canners the corn is not heated any, or at least very little above the boiling point, and discoloration will not occur.

IT PAYS TO CAN FOODS, EVEN IN WINTER

It has never occurred to most women that there are economic reasons justifying the canning of onions, carrots, cabbage, beets, and many other similar vegetables during the winter months, provided one has plenty of cans that are not needed for other purposes. In the midst of winter a woman can save time and money very often by canning at one time a dozen cans of some particular product. For instance, a dozen quarts of soup may be prepared at one time, and canned with not a great deal more trouble than preparing enough for one meal. The dozen quarts of soup are cooked with the same fire, and although the period of sterilization is somewhat longer than the time ordinarily required to make soup, there is infinitely less gas used than there would be if each of the dozen quarts of soup were made on separate occasions.

Again, there is an advantage in having a stock of canned soup and vegetables all ready to serve at a moment's notice. On days when other duties demand a woman's attention it is a great relief to be able to step to the cellar and find there a stock of canned foods in readiness for the occasion.

The author finds it very convenient to can a dozen quarts of onions at a single time, and have the odor of the onions in the house only once instead of a dozen

times. In fact, the odor is almost missing on that one occasion because the onions are cooked in partially sealed jars and no odor can escape after the onions go into the canner.

It pays to get the canning habit, not only during the summer months, but even in winter.

CANNING FOODS FOR COMMERCIAL PURPOSES

If the canning business is being entered for commercial purposes, it will be necessary to apply to the U. S. Department of Agriculture for the national laws and regulations on canning, and to the State for the State regulations. The food legislation which has been enacted by the various States and by the National Government is intended to prevent the practice of deception by unscrupulous manufacturers.

The various laws provide for certain standards with which foods must conform. Labels must not be deceptive. Foods must be packed under sanitary conditions. These regulations help the honest canner as much as the consumer, for without them the reputable concern must always be fighting dishonest competition.

Certain standards of quality have been fixed by the various canneries and the canning organizations. One canner often puts up several different grades of the same product. This scheme is very necessary since uniform quality it essential for trade purposes.

Peas are graded into four different sizes; asparagus is graded for size and quality; beans are graded for quality; corn is graded for age and quality; tomatoes are graded and packed solid or loose.

Hence, if the object is to establish oneself with a certain trade, one of the necessary parts of the business is

to produce uniform quality. With the housewife who is canning only for family consumption this is entirely unnecessary.

Since this treatise is intended principally for the home we will not consider further the commercial side of the question.

EVAPORATED VEGETABLES AND FRUITS

This method of preserving vegetables and fruits should be resorted to in a large measure this summer. It is an excellent way to preserve corn, peas, squash, pumpkin, apples, pears, peaches, and apricots. The author would urge the women of the country to employ this method of preserving these fruits and vegetables since it entails no outlay of capital, and there will be just that many more cans in which to preserve the perishable foods.

Drying clubs should be organized throughout the country. The title "Drying Club" hasn't a very loud appeal, but the fruits of the labor of such clubs will appeal to millions of hungry people next winter. I know that some well fed persons will turn up their noses at the idea of eating dried corn, and they may be heard to dramatically remark, "The Lord deliver me from dried corn," but next winter they may utter the same appeal save for one word, and that word will mean the difference between plenty and hunger. Their appeal might be, "Lord, deliver me some dried corn." Anyway, dried corn and other dried foods (or we might say evaporated foods, which sounds a little more inviting) are excellent, nutritious, and wholesome. They may not be equal in flavor to the same products put up in cans, but they are mighty satisfying to the hungry man, woman and child.

All these foods may be evaporated by the rays of the sun in communities where the sun shines the greater portion of the time. Frames sided with cheesecloth and covered with window sash make an ideal arrangement for this purpose. However, it is not absolutely necessary to go to even the trouble of making such crude frames. Wooden trays made of plastering lath, or large pans covered with cheesecloth will suffice. If the glass covers are not used, lath should be laid across the trays, over which mosquito bar should be stretched in order that the food be protected from flies and other insects. If weather conditions are such that these products cannot be evaporated by the heat of the sun, then the oven should be used. To use the oven is more tedious and bothersome, but it serves the purpose very well; and since the product being dried needs very little attention during the process of evaporation, there can be no plausible excuse offered for not employing this artificial heat when the sun's heat cannot be employed.

THE TOMATO

Less than a century ago the tomato was thought to be unfit for food and was grown only for ornamental purposes. To-day it is used in larger quantities than any other vegetable. The census shows that in the year 1909 there were packed in the United States 1,536,000,000 cans of tomatoes, and it must be remembered that this staggering number represents only the output of the commercial canneries. These figures by no means represent the total bulk of the tomatoes used. The number of cans preserved by the American housewife would present another surprising total.

The tomato does not occupy a usurped position on the table of civilized man: it is worthy of all our appreciation. No other fruit or vegetable lends itself to so many different uses. Soups, salads, stews, relishes, entrees, sauces would lose one-half their relish were it not for the humble tomato. To be sure, its glory is not won on the merits of its nourishing qualities, for it consists largely of water, acid, sugar and fiber plus flavor and color. What more should we ask for in one particular food? It is the monarch of the garden, the vegetable supreme.

The varieties of tomatoes grown are almost without number. For canning purposes those varieties that are firm, smooth, and of medium-size are the most desirable.

The "Stone" variety is favored largely by canning factories, and for the garden plot plants of this variety will never be disappointing. However, there are many other varieties of equal merit. The seeds put out by the reliable seed companies can nearly always be relied upon.

Purchasing Tomatoes for Canning

For the housewife, price and quality are two items to be regarded. Tomatoes should be canned at the season when they are most plentiful and the prices are lowest. To buy partially decayed or badly wilted tomatoes at bargain prices is poor economy. The tomatoes should be firm and well ripened, but not over-ripe. Care must be taken to remove all decayed portions if tomatoes of poor quality are being used. The housewife should avoid, if possible, the use of tomatoes for canning purposes which show signs of decay. The risk of spoiled cans is too great when such tomatoes are used.

Cold-Pack Method

Scald the tomatoes in boiling water until the skins are loosened. Lift from the boiling water and submerge in cold water immediately. Peel and pack in jars which have been sterilized. Fill jars to within 1 inch of top. Pack whole or cut into sections as desired. Add 1 teaspoonful of salt to the quart, and a little boiling

water to fill the open spaces. Place covers on jars as each one is filled; partially seal, but not tight. (Cap and tip tin cans.)

TIME FOR STERILIZING

Hot water bath outfit	30 minutes
Water-seal outfit	25 minutes
Steam pressure outfit, 5 lbs. steam	20 minutes

Remove from canner, tighten covers and invert.

The Open Kettle Method

Select sound, ripe tomatoes. Scald them in boiling water for 2 or 3 minutes when the skins will be loosened, then immediately plunge them into cold water. Remove the skins, cut into sections and put into the kettle—preferably a porcelain-lined one. Add 1 even teaspoonful of salt for each quart. Bring to the boiling point slowly. Stir frequently to prevent burning. Boil for 30 minutes, or until the tomatoes are done. Immediately put them into sterilized jars and seal tight. Invert until cold. To sterilize the jars, put them into water and keep them boiling for 30 minutes, then when the tomatoes are ready remove one jar at a time and fill. Sterilizing the jars makes a little extra work, but the time required is well spent. When taking the jars and covers from the water do not touch the inside of either with the fingers. Have everything sterile that

is used in filling the jars. The funnel, cup, fork and spoons used should first be put into boiling water for a few minutes.

Canned Tomatoes for Soup

Select well ripened tomatoes. Plunge them into boiling water for 2 or 3 minutes. Immediately put them into cold water, remove the skins and cut them into sections. Cook in an open porcelain or aluminum kettle for 30 minutes. Then press through a sieve that will not allow the seeds to pass through. Return to the kettle and evaporate for 15 or 20 minutes. Put them into sterilized cans as directed in the open kettle method, and seal tight. Invert the jars until cold. If economy of jars is a consideration, the tomatoes can be evaporated to one-half their original bulk and then diluted when used.

CORN

In point of quantity canned corn ranks second only to tomatoes. It is one of the foods that play an important part in our food supply. Its consumption is confined largely to the United States, and strange as it may seem, in some countries canned corn is almost an unknown food. No better food grows. It is wholesome, nutritious, cheap, and the people of America can feel justly thankful that they are blessed with this gift of a benevolent Providence. The German may eat his potatoes, the Chinaman his rice, the Italian his loved spaghetti, the Scotchman his oats, and the Englishman his baked beans; but who would give in exchange for any of these a dish of delicious sweet corn?

Field corn, while a delicious, wholesome food when ground into meal and converted into porridge or bread, is used very little in its green stage and is never used for canning purposes. The various varieties of sweet corn, of which there are many, are all desirable for canning purposes.

The quality of canned corn will depend materially upon the age and condition of the corn when it goes into the cans and on the skill of the one in charge of the canning. Corn should be gotten into the cans as soon after it is pulled as possible. It begins to lose its rich, sweet flavor within a day after it is pulled. It should be han-

dled carefully and not bruised. If allowed to stand in large heaps in warm, sultry weather it soon becomes sour. All the knives and pans used in handling the corn should be kept scrupulously clean. This is very important if one wants to eliminate the dangers of spoilage.

How to Can Corn

Secure corn that has been pulled not more than six hours, and if possible have it come right from the farm to your kitchen. Remove the husks and the silk. Plunge the ears into boiling water for 6 minutes, remove and immediately plunge into cold water. Cut from the cob with a sharp knife, cutting from the tip end towards the butt end. Do not cut so deep that a portion of the tough fiber of the cob accompanies the grains. It is better to cut shorter and then scrape the cobs. Pack the corn in the jars, allowing a space of 1½ inches at the top. Add 1 even teaspoonful of salt and 1 of sugar to each quart of corn. Fill the jars with boiling water, put the rubbers and covers on and partially seal, not tight. Put the cans into the sterilizer. (Cap and tip tin cans.)

Time for Sterilizing

Water bath outfit.....3 hours
Water-seal outfit.....160 minutes
Steam pressure outfit, 5 lbs. steam.....120 minutes

Remove, seal tight, and invert to cool.

Corn on the Cob

Follow the directions in the preceding recipe, using one-half gallon jars, and pack the ears in the jars alternating the butt and tip ends. Fill the jars with boiling water and add 2 teaspoonfuls of salt to each half gallon can. Put on rubbers and covers, partially seal, put into canner and sterilize as directed in foregoing recipe.

Corn and String Beans

The corn and the beans must be fresh. Do not purchase these vegetables for canning purposes if they are stale, even at bargain prices. String and wash the beans, then break them into inch lengths. Husk and silk the corn. Plunge them into separate kettles of boiling water for 6 minutes. Remove and put into cold water. Cut the corn from the cob, blend with the beans, using half and half, and fill the jars, leaving a space of 1 inch at the top. To each quart jar add 1 teaspoonful of salt and fill with boiling water. Put rubbers and covers on, partially seal. (Cap and tip tin cans.) Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit..... 3 hours
Water-seal outfit ..... 160 minutes
Steam pressure outfit, 5 lbs steam..... 120 minutes

Remove, tighten covers, and invert to cool.

Succotash

Secure fresh corn and fresh lima beans. Cook the beans one-half hour, and during this period husk and silk the corn. Blanch the corn 6 minutes; plunge into cold water, and cut from the cob with a sharp knife. There should be two parts corn and one part beans. Blend the corn and the beans, fill the sterilized jars, allowing a space of 2 inches at the top. To each quart add 1 teaspoonful of salt and 1 teaspoonful of sugar. Fill with boiling water, put rubbers and covers on, and partially seal. (Cap and tip tin cans.) Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit	3 hours
Water-seal outfit	160 minutes
Steam pressure outfit, 5 lbs. steam	120 minutes

Remove, seal tight, and invert to cool.

Corn and Tomatoes

Both vegetables must be fresh. Scald the tomatoes, and then plunge into cold water and remove the skins. Husk and silk the corn. Submerge in boiling water 6 minutes, then immediately put into cold water. Cut the corn from the cob, and fill sterilized cans with equal parts of corn and chopped tomato. Add 1 teaspoonful of salt to the quart. Put on rubbers and covers, par-

tially seal (cap and tip tin cans), and put the jars into the canner.

Time for Sterilizing

Hot water bath outfit	3 hours
Water-seal outfit	160 minutes
Steam pressure outfit, 5 lbs. steam	120 minutes

Because of the fact that it requires a shorter period of time to sterilize tomatoes, it is economy in time and fuel to can the corn and the tomatoes separately and then blend them when preparing them to serve.

A Dish of Dried Corn

Corn, green peas, squash, pumpkin, apples, peaches, pears, apricots, plums, cherries, raspberries can be evaporated either by the sun's rays or in a warm oven.

Apples should be pared, cored and cut in quarters or eighths. Place the sections on the pan or rack just so they do not touch each other.

Prepare pears the same as apples for drying.

Peaches, apricots, plums and cherries should be washed and pitted. Place on the drying pan or rack as closely as possible without having the sections touching.

Cut the pumpkin and squash in small sections and place on pans or racks same as fruit.

DRIED CORN

In order to preserve the surplus green corn this season, we should resort to the method our grandmothers used to preserve it. Many of the younger generation have never tasted evaporated sweet corn. Someone will say, "Well, they haven't missed much." It is true that canned corn is considered superior in flavor by most people, but hungry people are not so insistent upon delicacy and flavor, and there will be a lot of hungry people in the world next winter.

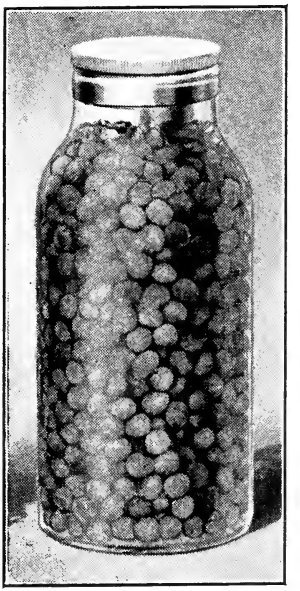
Should there be a scarcity of cans this season, as in all probability there will, we would strongly urge women to evaporate every ounce of corn they can procure at reasonable prices. Dried corn is a nutritious, wholesome, appetizing food.

How to Evaporate Corn

Select at least a bushel of fresh corn. Remove the husks and silk. Boil it in water ten or twelve minutes. Cut it off the cob with a sharp knife. Spread it on trays covered with cheesecloth to the depth of about one-fourth inch. If the drying is to be done by the sun's rays, frames built for the purpose as described in the article on "Evaporated Vegetables and Fruits" (page 60) should be used. If the corn is to be dried in the house by the heat of the oven, pans or trays of a size

to fit the oven must be used. If the oven is used a small quantity only can be evaporated at one time. The corn should be stirred occasionally while drying. If it is dried too rapidly it will turn very red, and also if it is dried too slowly it will turn dark and may become sour. The drying period should cover two or three days. See that the corn is thoroughly dried and then put it into cloth or paper bags and store in a dry place.

Evaporated corn should be soaked over night, or for at least three or four hours before cooking. It may be prepared in any way in which canned corn is prepared.



A Jar of Peas

Peas are one of the best forms of vegetable proteins.

PEAS

Peas are one of the most valuable forms of vegetable protein we have. They belong to that group of legumes of which beans and lentils are two important members. Every pint of peas that is not needed for immediate consumption this summer should be put into cans for winter use. There is enough nourishment in a pint of peas to take the place of a day's ration of meat. Peas are almost as acceptable to the man in the trenches as meat itself, and women would do well to help preserve this nutritious vegetable when the harvest arrives.

Canning Peas

Purchase strictly fresh peas, and hull them. Blanch in boiling hot water for 5 minutes. Remove and plunge into cold water. Fill the jars to within 1 inch of the top. Add 1 teaspoonful of salt to the quart. Fill the jars with boiling water, put rubbers and covers on immediately after filling and partialy seal, (Cap and tip tin cans). Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit..... 2 hours
Water-seal outfit ..... 100 minutes
Steam pressure outfit, 5 lbs. steam..... 75 minutes

Remove, seal tight and invert to cool.

Carrots and Peas

Purchase strictly fresh peas, and tender, fresh carrots. Hull the peas and blanch as directed in the preceding recipe. Scrape the carrots, slice, and blanch in boiling water 3 minutes. Remove and immediately plunge into cold water. Fill the jars to within 1 inch from top with equal parts of carrot and peas. Add 1 teaspoonful of salt to the quart. Fill the jars with boiling water. Put on rubbers and covers, partially seal (Cap and tip tin cans). Put the jars into the canner.

TIME FOR STERILIZING

Hot water bath outfit..... 2 hours
Water-seal outfit ..... 100 minutes
Steam pressure outfit, 5 lbs. steam..... 75 minutes
Remove and seal tight.

Dried Peas

If cans are not available do not allow peas to ripen or waste for want of your attention. They can be dried successfully either by artificial or natural heat. The peas should be shelled and parboiled for from six to ten minutes, then turned into a colander and drained. Spread them out on racks covered with cheesecloth and place them in a location where the sun will reach them all day long. Lay lath across the frames and cover with

mosquito bar to protect the peas from flies and insects. If many are to be dried, a good idea is to build a frame and cover it with glass, closing the sides with cheesecloth which will allow the free circulation of air. Such an arrangement is ideal for drying peas, corn, apples, peaches, etc. If weather conditions are such that the peas cannot be evaporated outside by the heat of the sun, then it will be necessary to put the peas on trays or pans and dry them in the oven. The oven must be kept only moderately warm, never hot. In case a gas oven is being used the fire should be turned on and off as may be necessary to keep the oven good and warm. The peas must be evaporated until they are thoroughly dried, when they can be put into a bag and kept indefinitely. Soak over night before cooking.

BEANS

Beans belong to the family of legumes, and are a splendid source of protein. They are the poor man's meat, and in times of dire need like the present an endeavor should be made to triple the normal production of this splendid meat substitute. The fact that the ripe bean is as desirable for food as when in the green stage renders it a very serviceable product in times when large quantities of non-perishable food must be stored.

I would strongly advise against using cans this summer for the purpose of canning beans. It would be foolish to utilize can space for this product that is non-perishable, when all cans are so urgently needed for perishable products.

Of course, the green string bean is a different proposition. The only way to successfully preserve string beans is to can them, but this particular season, when every pound of food that can be grown must be preserved, it would seem the better plan to allow the beans to ripen and then harvest the dry beans, leaving the cans for other foods.

During the winter season, after a number of cans have been opened and there is no immediate demand for them, there is an advantage in canning a dozen or more cans at one time in order to have them ready when the occasion demands. Furthermore, by cooking them in

cans the danger of having scorched beans is entirely removed. Fuel is saved by cooking a dozen quarts in the canner at one time over the same gas burner, instead of cooking one quart at a time on twelve different occasions.

Canned Baked Beans

Soak 4 quarts of navy or white pea beans in slightly salted water over night. In the morning drain. Add fresh water, put over the fire and cook for 2 hours. Thirty minutes before the time is up, add 1 pound of minced bacon, 1 cupful of brown sugar, more salt if necessary, and 1 pint of minced onion. When the 2 hours are up, remove the beans from the fire, put them into sterilized jars, fill the jars to within 1 inch from the top with beans and the remaining space with the liquid in which the beans have been cooked. Put rubbers and covers on, partially seal. (Cap and tip tin cans). Put in canner.

Time for Sterilizing

Hot water bath outfit..... 3 hours
Water-seal outfit ..... 160 minutes
Steam pressure outfit, 5 lbs. steam..... 120 minutes

Remove, seal tight, and invert to cool.

Canned Lima Beans

Soak 4 quarts of dry lima beans over night in slightly salted water. In the morning drain the water off. Add sufficient fresh water to cover well, put over fire and cook for 2 hours. Keep covered with water. It is well to have an asbestos plate under the kettle to keep the beans from scorching. Add more salt if needed. Fifteen minutes before the preliminary cooking is finished add ½ pound of butter. Put the beans into sterilized jars, fill to within 1 inch from the top with the beans and then add liquid until full. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into canner as soon as filled.

TIME FOR STERILIZING

Hot water bath outfit..... 3 hours
Water-seal outfit ..... 160 minutes
Steam pressure outfit, 5 lbs. steam..... 120 minutes

Remove, tighten covers, and invert to cool.

Beans with Tomato Sauce

Soak 4 quarts of lima or white pea beans in slightly salted water over night. In the morning drain well. Add sufficient fresh water to cover well. Cook for 2 hours, allowing the water to boil down well, but being careful to avoid burning. Fifteen minutes before the

two-hour period is up, add enough strained tomatoes to cover the beans. At the end of 2 hours put into sterilized jars, fill the last inch at the top with tomato only. Put rubbers and covers in place, partialy seal. (Cap and tip tin cans.) As fast as cans are filled put them into the canner.

TIME FOR STERILIZING

Hot water bath outfit..... 3 hours
Water-seal outfit ..... 160 minutes
Steam pressure outfit, 5 lbs. steam..... 120 minutes

Remove, tighten covers, and invert to cool.

Pork and Beans

Soak 4 quarts of navy or white pea beans in water over night. In the morning drain thoroughly. Add sufficient fresh water to cover well. Put over fire and cook for 2 hours. An asbestos plate should be put under the kettle to avoid burning. Thirty minutes after the beans start to boil, add 2 pounds of pork cut in thin slices. At the end of 2 hours put the beans into sterilized jars, filling the last inch with the liquid portion only. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner as they are filled.

TIME FOR STERILIZING

Hot water bath outfit	3 hours
Water-seal outfit	160 minutes
Steam pressure outfit, 5 lbs. steam	120 minutes

Remove and tighten covers.

Canned Kidney Beans

Soak 4 quarts of kidney beans over night. In the morning pour the water off. Add sufficient fresh water to cover well. Put over the fire and cook for 2 hours. It is well to put an asbestos mat under the kettle to avoid burning. Thirty minutes before the preliminary cooking is finished, add 2 quarts of strained tomatoes, and 1 pint of chopped onion. Season with salt. When the two-hour period is up, put the beans into sterilized jars, filling the last inch of the jars with the liquid only. Put rubbers and covers in place, partialy seal. (Cap and tip tin cans.) Put into the canner immediately.

TIME FOR STERILIZING

Hot water bath outfit	3 hours
Water-seal outfit	160 minutes
Steam pressure outfit, 5 lbs steam	120 minutes

Remove and tighten covers.

BEETS

The red beet is a very desirable vegetable when canned. It meets the demand most admirably when a quick salad is required. It is a vegetable that is quite difficult to can successfully, owing to the fact that unless carefully and properly handled it loses its attractive red color, which is one of its good points.

Red beets should be canned only in glass or in lacquered tin cans. Be careful to avoid the use of ordinary tin cans. If put up in glass, as soon as the jars are cooled wrap them in paper or put them in a dark cupboard in the cellar to prevent bleaching.

Beets bleed very easily while cooking if trimmed too close. One inch of the top and the entire root must remain on until the beets are peeled.

Canned Beets

Select young, tender beets, wash, and cut off the tops one inch from the beet; do not cut off the roots. Blanch for 10 minutes in boiling water. Remove and plunge into cold water immediately. In a minute or two remove them from the cold water and carefully scrape the skins off; do not peel. Pack into sterile jars, allowing the beets to remain whole if size permits. Add 1 teaspoonful of salt to the quart. Fill the jars with boiling water. Put rubbers and covers in place, partially

seal. (Cap and tip tin cans.) Put into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	100 minutes
Water-seal outfit	80 minutes
Steam pressure outfit, 5 lbs. steam	70 minutes

Turn flame out, open canner for two minutes, then remove cans; immediately seal tight, and invert to cool.

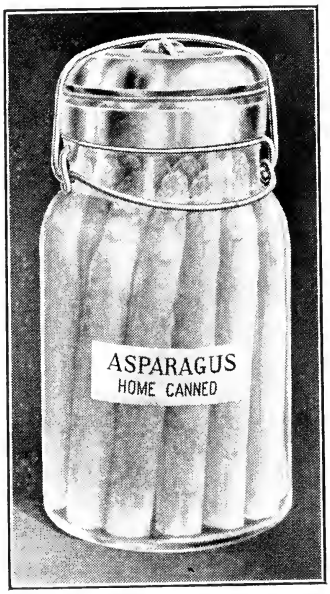
Pickled Beets

Select young, tender beets. Wash, cut off the tops 1 inch from the beet, but do not trim the roots. Cook in boiling water until tender. Plunge into cold water immediately. Then remove the skins with the hands or scrape with a knife, but do not peel. Allow the beets to remain whole, or they may be cubed or sliced if one chooses. Put them into sterile jars, add 1 teaspoonful of salt to the quart, and fill the jars with 1 part vinegar and 2 parts water, sweetened to taste. Put the rubbers and covers in place, partially seal. Put into canner immediately after filling.

TIME FOR STERILIZING

Hot water bath outfit	45 minutes
Water-seal outfit	30 minutes
Steam pressure outfit, 5 lbs. steam	25 minutes

Remove, seal tight, and invert to cool.



Any vegetable can be successfully canned by the housewife if the simple steps necessary to insure complete sterilization are observed.

ASPARAGUS

Select fresh, young, tender stalks. Wash them carefully and well. Blanch in boiling water for 5 minutes. Remove and immediately plunge into cold water. In a minute or two lift the stalks from the cold water, and pack into jars. The tip of the stalks should be 1½ inches below the top of the can. Add 1 teaspoonful of salt to the quart, and fill jars with boiling water. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into the canner as soon as the cans are filled.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, seal tight, and invert to cool.

OKRA

Select okra that is young and tender. If too old, the pods will be fibrous, and will turn red when sterilizing. Wash the pods thoroughly, cut into sections, rejecting the stem end and all hard portions. Blanch in boiling water for 5 minutes. Remove and immediately plunge into cold water. In a minute or two remove from the cold water, and immediately pack into cans. Add 1 teaspoonful of salt to the quart. Fill the jars with boil-

ing water. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner as soon as they are filled.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, seal tight, and invert to cool.

SPINACH

Select fresh, bright green spinach. Pick over carefully and discard all the yellow and bad leaves. Wash through several waters. When the spinach is thoroughly clean, blanch in steamer for 15 or 20 minutes. Remove and plunge into cold water. Take it from the cold water in 1 minute and drain. Fill the jars, packing the spinach in well. An inch at the top of the jars should be filled with boiling water. Add 1 teaspoonful of salt to each quart of spinach. Put the rubbers and covers in place as fast as the jars are filled, and partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs steam	60 minutes

Remove, tighten covers, and invert to cool.

KALE

Because of its hardiness, its abundant growth and its excellent flavor, kale is a vegetable with which people should become more familiar. A small patch in the garden will supply the average family all summer if kept well watered.

It is usually cooked in water and then drained, after which it is seasoned with vinegar, bits of crisped bacon or oil. It is excellent prepared by any of the methods used for spinach.

For canning purposes select strictly fresh kale. Pick it over carefully. In midsummer one must watch carefully for worms. Wash it thoroughly, plunge into boiling water 2 minutes, or better, blanch in steamer for 15 minutes. Take it out and put it into cold water for 1 or 2 minutes, then pack it into sterile cans. An inch at the top of the can must be filled with boiling water. Add 1 teaspoonful of salt to each quart. As fast as the jars are filled, put the rubbers and covers in place, and partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, seal tight, and invert to cool.

BRUSSELS SPROUTS

Brussels sprouts like other vegetables must be strictly fresh. Don't try to can them after they are old and wilted. Wash thoroughly and put into boiling water for 3 minutes. Remove and immediately plunge into cold water. Take from the cold water in one or two minutes, and put them into sterile jars. The last inch at the top must be filled with boiling water. Add 1 teaspoonful of salt to the quart. As fast as the jars are filled, put the rubbers and covers in place, and partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, tighten covers, and invert to cool.

CAULIFLOWER

Select heads on which no dark specks or spots show. Separate the flowerettes and watch carefully for insects. Place in salted water for 4 hours. Remove and blanch in boiling water for 5 minutes. Quickly plunge into cold water. Pack into sterile cans, being careful not to break the flowerettes. Fill the cans with slightly salted boil-

ing water. Put rubbers and covers in place and partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	60 minutes
Water-seal outfit	50 minutes
Steam pressure outfit, 5 lbs. steam	40 minutes

Remove, tighten covers, and invert jars.

GREENS

Endive, dandelions, Swiss chard, beet tops, and other similar greens.

The greens must be fresh. Wash through several waters until thoroughly clean. Plunge into boiling water for 3 minutes, or which is better, blanch in steam for 15 minutes. Remove and plunge into cold water. In a minute or two take from the cold water and drain. Put into sterile jars, adding 1 teaspoonful of salt to the quart. Fill jars with boiling water. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove jars, immediately seal tight, and invert to cool.

CARROTS

Carrots should be canned when they are young and tender if canned at all. There is no particular object in canning them except to retain the sweet, fresh flavor of the young carrot. After carrots are full grown they are easily kept by putting them in earth in the cellar, where they can be held for use as the occasion demands.

When selecting carrots for canning see that they are not wilted. Scrape them. Blanch in boiling water for 5 minutes. Remove and plunge into cold water. Pack them into cans. They may be sliced or canned whole. Add 1 teaspoonful of salt to each quart of carrots. Fill the cans with boiling water. Put the rubbers and lids in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

Time for Sterilizing

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, seal tight, and invert jars.

EGGPLANT

Select strictly fresh eggplant. Remove the skin and slice crosswise, cutting slices about one-half inch thick.

Blanch 3 minutes in boiling salted water. Remove and plunge into cold water. Immediately pack in glass jars. Add 1 level teaspoonful of salt to the quart. Fill with boiling water. Put rubbers and covers in place and partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	60 minutes
Water-seal outfit	50 minutes
Steam pressure outfit, 5 lbs. steam	40 minutes

Remove jars, tighten covers, and invert to cool.

SWEET POTATOES

Pare the amount of sweet potatoes desired. Put them into cold water as they are pared to keep them from turning dark. Blanch the potatoes in boiling water 5 minutes. Remove and plunge into cold water. Pack into cans. Do not pack glass jars too tight as the potatoes swell slightly, and may burst the jars. Add 1 teaspoonful of salt to the quart. Fill with boiling water. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner as they are filled.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, seal tight, and invert jars.

SQUASH AND PUMPKIN

Peel the pumpkin or squash. Cut into cubes. Put into kettle; add a little boiling water; cover and cook slowly until tender. If the fire is too hot pumpkin or squash is inclined to scorch. Stir occasionally. When tender remove from the stove and press through puree sieve or colander. Pack in sterilized jars and add 1 teaspoonful of salt to the quart. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) As fast as the cans are filled put them into the canner.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, tighten covers, and invert to cool.

SWEET PEPPERS

Wash ½ bushel of red or green peppers. Cut out the stem end and remove the seeds. With a sharp pair of scissors cut the peppers into rings. Put them into boil-

ing water and blanch for 2 minutes. Remove from the boiling water and plunge into cold water immediately. Allow to stand in the cold water 10 minutes. Pack in the jars, adding 1 teaspoonful of salt to the quart. Fill the jars with boiling water. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) As fast as the cans are filled place them in the canner.

Time for Sterilizing

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, tighten covers, and invert to cool.

ONIONS

Peel enough onions to fill the desired number of cans. To prevent the eyes from smarting, peel the onions under water, or stand in a draft. As the onions are peeled, drop them into cold water. When ready to fill the jars, blanch the onions in boiling water 5 minutes. Then plunge into cold water and allow to stand 5 minutes. Pack into the cans. Add 1 teaspoonful of salt to the quart. Fill the cans with boiling water. Put the rubbers and covers in place and partially seal. (Cap and tip tin cans.) As fast as the cans are filled put them into the canner.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, seal tight, and invert the cans.

If the onions are so large that it is necessary to cut them in order to get them into the cans, the liquid in the cans will be cloudy after they are sterilized.

SAUER KRAUT

A dish with a homely name and a homely flavor, but held in high esteem by many people. In olden times, as regular as autumn came, people put into the cellar two or more casks of kraut. It was one of the necessary provisions for winter.

It is easily and quickly made, and is an excellent way to store cabbage for winter use for those who like it.

Fifty pounds of cabbage will make about five gallons of kraut.

Earthen or cement jars or wooden casks should be provided in which to pack the kraut. If casks are used they should be of oak, cpyress or white pine.

The tools required for making kraut are a slaw cutter and a wooden potato masher or similar block of wood with a handle with which to tamp the cabbage down.

How to Make Kraut

Remove the loose outside leaves from the heads of cabbage. Cut the heads in two, splitting the hearts. With the slaw cutter cut in long shreds, not too fine. Pack the shredded cabbage into a large receptacle to the depth of 2 inches. Salt well. (1¼ pounds of salt to 50 pounds of cabbage is the correct proportion.) Tamp the cabbage down with a wooden plunger until it is well packed and slightly bruised. Add another 2 inches of the shredded cabbage, and repeat the process of salting and tamping. Continue in this manner until the vessel is full, or the desired amount of cabbage has been used. Now take some of the clean loose leaves which were removed from the heads, and cover the cabbage well with them. Put a clean board or plate that will just fit the vessel on top of the leaves, and weight it down well with a rock. In the early fall it will take from 15 to 20 days for the kraut to cure, and in the late fall it will take longer.

Canning Sauer Kraut

As soon as the kraut is fully cured it is ready to can. Fill jars nearly full with the kraut, then add liquid from the kraut to entirely fill the jars. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Turn flame out, open canner for a few minutes, then remove cans; immediately seal tight and invert to cool.

Sauer Kraut with Fresh Pork

Cook the pork until tender, then soak it in raw vinegar until well saturated. Fill the jars with kraut as directed in the preceding recipe. In the center of each jar put a slice or two of the pork. Fill an inch at the top of the jar with the liquid from the kraut or boiling water.

Sterilize same length of time as directed to sterilize plain canned kraut. Remove from canner, and seal tight.

RELISHES

The tastes of human beings demand something more distinctly flavored than plain meat and vegetables, so relishes were invented, and their popularity has increased to the point that most people feel that a noon or evening meal is not complete without them.

The author does not propose to argue the respective merits of these various forms of appetizers. Some dyspeptics declare that they are ruinous to digestion and health, while other people eat them daily and thrive. One thing seems certain, they cannot be distinctly harmful, at least to the healthy individual. Their distinctive, piquant flavor adds zest to many forms of meat and vegetable dishes, and regardless of what the faddish dietitian might say, they seem to fill an important place in the diet of the average individual.

Tomato Catsup No. 1

Cut up 1 peck of ripe, red tomatoes, put in kettle and cook until tender. Then press through a puree or wire sieve which will not permit the seeds or skins to pass through. Return the tomato pulp to the kettle. Tie in a muslin bag, 2 tablespoonfuls of cinnamon, 2 tablespoonfuls of unground cloves, 2 tablespoonfuls of allspice and suspend in the tomato pulp. Add ¼ cupful of salt. Cook over slow fire until reduced one-half, then

add 2 cupfuls of brown sugar and 2 cupfuls of vinegar, and boil down to desired consistency. Stir frequently to avoid burning. Put in sterile bottles, close the bottles with sterile corks and pour over corks melted sealing wax.

Catsup No. 2

Cook 1 peck of ripe, red tomatoes until tender, then press them through a puree sieve, or wire sieve which will not permit the seeds or skins to pass through. Return the tomato pulp to the kettle. Evaporate to one-half the original quantity. Then add ¼ cupful salt, 1 teaspoonful cayenne pepper, 1 tablespoonful each of ground cinnamon and allspice, 2 cupfuls vinegar, and boil down to desired consistency. Put into sterile bottles, close with sterile corks and cover with melted sealing wax.

If a sweetened catsup is desired add ½ cupful or more of granulated sugar.

Tomato Catsup No. 3

Cut up 1 gallon of ripe, red tomatoes. Put them into a kettle and cook until tender. Then press them through a wire or puree sieve which will not permit the skins or seeds to pass through. Return the tomato pulp to the kettle. Add 4 even teaspoonfuls of salt and ½ even teaspoonful of red pepper. Suspend in it a muslin bag

containing the following spices: 4 level tablespoonfuls of unground mustard seed, 1 level tablespoonful of unground cloves, 2 tablespoonfuls of mixed spices, 2 tablespoonfuls of celery seed. A 2 large grated or chopped onions, and one cupful of vinegar. Evaporate over a slow fire; it is well to have an asbestos mat under the kettle. Stir frequently. Cook until of desired consistency, put into bottles and seal while hot. To seal, close the bottles with corks which have been boiled, and cover well with sealing wax.

Chili Sauce

3 gallons tomatoes.
3 pints chopped onion.
1 pint chopped celery.
4 cupfuls sugar.
1 cupful ripe sweet peppers, chopped.
½ cupful salt.
2 pints cider vinegar.
Red pepper to suit taste.

Chop the tomatoes and other vegetables fine with a chopping knife or put them through a food chopper, using the coarsest knife. Measure after they are chopped. Turn the tomatoes into a cheese cloth bag and drain all the water off. Put this water into the kettle and evaporate it to one-fourth the original amount. Turn the chopped tomatoes, the onions, the celery and the peppers into the kettle and evaporate to one-half the original bulk. Then add the seasonings and cook to the desired consistency. After the vegetables have been

added the mixture must be stirred frequently or it will burn. The amount of seasoning given may not produce the flavor desired by some, hence the amount of sugar, vinegar and spices should be regulated so as to give the flavor the family will enjoy. Put it into bottles while it is boiling hot, and seal immediately. There is no danger of this sauce spoiling if the bottles or jars in which it is put have been sterilized just previous to filling them and sealing wax is used to cover the corks.

Chow Chow No. 1

2 qts. green tomatoes.
2 qts. small onions.
2 qts. yellow string beans.
3 heads of cauliflower.
3 cucumbers.
6 large red peppers.

Chop the vegetables fine with a chopping knife, or run them through a food chopper. Put in a brine made by dissolving 1 pound of salt in 5 pints of water and let stand over night. In the morning bring the brine, with the vegetables still in it, to the boiling point and keep boiling for a few minutes.

In a separate vessel bring 1 gallon of cider vinegar to a boil. With a little water make a paste of the follow-ingredients:

¼ pound ground mustard.
¼ pound tumeric.
½ ounce celery seed.
1 cupful brown sugar.
2 level tablespoonfuls flour.

Put this paste into the vinegar and boil until it begins to thicken. Drain the brine from the vegetables thoroughly, and pour the vinegar over them. Mix thoroughly, heat, and seal while hot. Unless the brine is drained from the vegetables thoroughly the chow chow will be too thin.

(Given in Bulletin 521 U. S. Dept. of Agriculture.)

Chow Chow No. 2

½ peck green tomatoes.
1 quart onion.
1 quart cabbage.
1 quart celery.
1 pint sweet peppers.
1 cupful sugar.

Chop all of the vegetables fine and measure after they are chopped. Cover them with a brine made of 1 pound of salt and 5 pints of water. Allow to stand over night, and in the morning drain well. Press into kettle, cover with vinegar and add the sugar. Cook until tender, put into jars and seal immediately. If a sweet flavor is desired add more sugar.

Last of the Garden

2 quarts of shelled, green lima beans.
1 quart of very small onions.
1 quart of celery.
1 pint of sweet peppers.

Chop the celery and peppers, put them and the onions in a brine made of 1 pound of salt to 5 pints of water. Allow to stand over night. In the morning drain, cook the beans until tender, being careful not to get them so done they break. Put all the vegetables into a porcelain kettle and cover with vinegar. Heat and cook until the celery and onions are tender. Drain the vinegar from the vegetables. Make a paste of the following ingredients:

2 tablespoonfuls of ground mustard
2 tablespoonfuls of celery seed.
¼ teaspoonful of cayenne pepper.
2 tablespoonfuls of flour.

Mix these ingredients with a little water until the paste is smooth, then add it and 1 cupful granulated sugar to the vinegar and boil until it thickens. Pour over the vegetables, bring to the boiling point. Put in sterile jars at once, and seal tight.

In the fall one can find on the market or in the garden vegetables from which to make numerous combinations which are delicious prepared over the above recipe.

Pickled String Beans

String 2 pecks of young wax beans. Cook them in a kettle of boiling salted water for 1 hour. Drain. Put them into sterile jars. To 5 pints of weak cider vinegar add 1 cupful of sugar, 1 rounding tablespoonful

of mustard seed, 2 tablespoonfuls of grated horseradish, ¼ teaspoonful of cayenne pepper. Bring to the boiling point, but do not allow to boil. Fill the jars with the vinegar, put the rubbers and covers in place as the jars are filled and seal immediately. The vinegar should be prepared while the beans are cooking, and may be diluted to suit the taste.

All the seasonings except the sugar may be omitted if desired, in which case the vinegar should be quite sour.

Pickled Cabbage and Celery

Take ½ gallon of tender bleached celery and an equal amount of cabbage. Chop, but not too fine. Press into a porcelain kettle; add ¼ cupful of salt, 1 cupful of granulated sugar, 1 tablespoonful of mustard seed and enough cider vinegar to cover. Cook slowly until cabbage and celery are tender. Put into glass or earthen jars and seal immediately.

Cucumber Pickles

Select the small pickles. Wash thoroughly. Put them in a porcelain kettle or earthen jar. Make a brine of salt and water strong enough to bear an egg. Bring it to the boiling point and pour over the pickles. There must be sufficient brine to cover them. Allow to stand twenty-four hours. Take them out, rinse them, and pack

in glass or earthen jars. Cover with hot vinegar sweetened and spiced to suit taste, and seal immediately.

Stuffed Sweet Peppers

Cut out the stem ends and remove the seeds from the peppers. Place in jar or porcelain kettle and cover with salt water made of 1 part salt to 5 parts water. Allow to stand over night. Shred sufficient cabbage to fill the peppers. Season it with salt, mustard seed, and a little red pepper. Press into the peppers. Pack them in stone or earthen jars, cover with cold vinegar. These will be ready to use in twenty-four hours.

Green Tomato Pickles

In the fall when the frosts drive the green tomatoes to the market is the time to make green tomato pickles.

Select good quality green tomatoes. Wash and slice thin. Add some sliced onion if desired. Cover the sliced tomatoes with a brine made of 1 part salt to 5 parts water. Allow to stand over night. In the morning drain the brine off well. Put the tomatoes into a porcelain kettle, cover with vinegar, season to suit taste with sugar, pepper, celery seed and a few sticks of cinnamon. Bring to the boiling point and cook for twenty minutes. Put into glass or earthen jars while boiling hot, and seal immediately.

Cucumbers Packed in Salt

Purchase strictly fresh cucumbers. Wash thoroughly. Put a layer of the cucumbers in a clean earthen jar or water-tight wooden cask and cover with salt. Add a second layer of the cucumbers and cover with salt. Continue with alternate layers of cucumbers and salt until the desired amount has been packed. If the cucumbers are gathered from the patch they should be placed in the jar each day as soon as possible after they are gathered. Be sure to cover the last layer with salt before laying in more.

When wanting to use take some of the pickles from the brine, soak in several waters until the salt is drawn out, then put them in cold spiced vinegar until sufficiently sour .

CANNED SOUPS AND STEWS

A supply of canned soups in the family larder is a great convenience to the housewife. To come home late and in a few short minutes have a good home-made vegetable soup or stew ready to serve is a satisfaction that only the woman who is willing to put up these products can enjoy. Canning soups and stews is a means of saving time as well as many of the perishable vegetables.

The canning of soups and stews in the home is thoroughly practical, and if a woman will give it a trial once, it is safe to say that thereafter she will rarely be without a supply of home canned soups and stews.

Very often it is more practical to can only the combination of vegetables wanted in a soup, instead of making the meat stock and canning it with the vegetables. If the vegetables are canned they may be opened at any time, or when there happens to be sufficient meat stock for soup, and the soup is quickly made. Of course, if the stock is added to the soup when canned, then it is ready at a moment's notice whether there is available stock or not.

Meat Stock for Soup

Purchase 10 pounds of beef joints. Crack the bones with a hatchet or cleaver. Put the broken bones into a kettle and add 2 gallons of cold water. Put over fire

and bring to the simmering point. Skim off the fat and scum that boils up. The kettle should simmer for about six hours. Strain and fill bottles or jars. Add 1 teaspoonful of salt to the quart. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit	1 hour
Water-seal outfit	50 minutes
Steam pressure outfit, 5 lbs. steam	40 minutes

Vegetable Stew

Purchase 10 pounds of a cheap cut of meat on which there is very little fat. Put it into a kettle and add 2 gallons of cold water. Put over a slow fire and simmer for 5 or 6 hours. Skim when necessary. Take the meat from the kettle and with a sharp knife cut it into cubes. Return it to the kettle. Blanch in boiling water for 3 minutes and cold dip 4 pounds of carrots, 3 pounds of onions, 1 pound of potatoes, 2 pounds of celery. Cut the vegetables in cubes or slice them. Put into glass jars and add ½ cupful (more or less) of the cubed meat to each jar. Add 1 teaspoonful of salt to the quart. Fill with the boiling hot stock. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put cans into the canner as fast as they are filled.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Remove, tighten covers, and invert to cool.

Vegetable Soup

Make over the preceding recipe, only cut the vegetables fine and use only one-half the amount.

There is no occasion to adhere strictly to the list of vegetables given. Nearly every family enjoys certain combinations of vegetables, and those are the combinations that should be used. If dry beans are added to the soup, they should be soaked over night and cooked three hours in a kettle before adding.

If rice is added to the soup or stew it should be soaked over night and cooked for twenty minutes. If the rice is not cooked before putting it into the cans, they must not be entirely filled, as the rice swells and will burst the cans. The safer plan for the housewife is to first cook the rice to avoid this danger.

Combination of Vegetables for Soup

Prepare 12 pounds of carrots, 3 pounds of cabbage, 3 pounds of celery, 2 pounds of onions, 6 pounds of green string beans. Blanch all these vegetables in boiling

water 5 minutes, remove and cold dip. Chop fine, and put into jars. Add 1 teaspoonful of salt to the quart. Fill jars with boiling water, put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	80 minutes
Steam pressure outfit, 5 lbs. steam	70 minutes

Turn fire out, open canner, seal jars and invert to cool.

Unless the string beans are very young and tender they should be cooked for about one hour before going into the cans.

Combination No. 2

12 pounds carrots, 2 pounds celery, 2 pounds onions, 4 pounds dry lima beans.

Soak the beans over night; in the morning drain the water off. Add fresh water and cook for 2 hours or until they begin to get tender. Clean, and blanch the other vegetables in boiling water. Dip in cold water, then chop fine. Blend the beans with the other vegetables. Pack in jars. Add 1 teaspoonful of salt to the quart. Fill jars with boiling water. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner at once.

TIME FOR STERILIZING

Hot water bath outfit..... 90 minutes
Water-seal outfit ..... 80 minutes
Steam pressure outfit, 5 lbs. steam..... 70 minutes

Remove, and seal tight.

Chicken Broth with Rice

Dress three large fowls, joint them and put them into a kettle with 5 gallons of water. A lard can is good for this purpose, or the meat may be divided and two smaller kettles used. Simmer for five hours. Skim off fat as it rises. Remove the meat from the bones and cut in cubes or shred it. Keep adding boiling water when necessary, so there are five gallons of the finished stock.

Wash 5 pounds of rice, add it to 2 gallons of water and cook until tender, which will be about twenty-five minutes. Blend the rice with the stock and the chicken; keep it at the boiling point and put it into sterile jars. Add 1 teaspoonful of salt to the quart. Put rubbers and covers in place, partialy seal. (Cap and tip tin cans.) Put the cans into the canner as they are filled.

TIME FOR STERILIZING

Hot water bath outfit..... 90 minutes
Water-seal outfit ..... 80 minutes
Steam pressure outfit, 5 lbs. steam..... 70 minutes

Turn out fire, open canner, remove jars and seal tight, invert to cool.

Unless the sterilizing equipment is large this amount will fill more jars than can be sterilized at one time, in which case the remaining portion must be held at the boiling point until the first batch of cans is sterilized, when other cans may be filled with the remainder and sterilized.

The better idea is for the housewife to cook about one-fourth of the rice at a time and use one-fourth the chicken and stock with it if her sterilizing equipment will not accommodate more than seven or eight quart jars.

Chicken Gumbo

Prepare the same amount of chicken, and in the way directed in the preceding recipe for Chicken Broth with Rice.

When the chicken is ready, blanch 5 pounds of okra in boiling water for 3 minutes, and quickly dip into cold water. Cut the okra in ¼ inch lengths. Blanch 5 large tomatoes in boiling water; dip them in cold water and remove the skins. Cut them in cubes. Add the okra and the tomatoes to the chicken and stock. Bring to the boiling point. Put into jars. Add 1 teaspoonful of salt to the quart. Put the rubbers and covers in place as the cans are filled, and partially seal. (Cap and tip tin cans.) Put the cans into the canner as they are filled.

TIME FOR STERILIZING

Hot water bath outfit..... 90 minutes
Water-seal outfit ..... 80 minutes
Steam pressure outfit, 5 lbs. steam..... 70 minutes

If the canner will hold only eight quart cans, use but 2 gallons of the stock and meat at one time, adding the correct proportion of the okra and tomato.

Clam Chowder

To every quart of water use the white portion of 20 long clams, 1 small onion, ½ cupful tomato, 3 medium-sized potatoes, a few bits of salt pork, salt and pepper to taste.

Wash the clams in cold water and chop, rejecting the dark portion. Add the clams, the minced onion, the potatoes cut in cubes and the other ingredients to the boiling water and cook for fifteen minutes. Put into sterile cans. Put rubbers and covers in position, partially seal. (Cap and tip tin cans.) Put the cans into the canner as they are filled.

TIME FOR STERILIZING

Hot water bath outfit..... 2 hours
Water-seal outfit .....110 minutes
Steam pressure outfit, 5 lbs. steam..... 90 minutes

Turn out fire, open canner, remove jars and immediately seal tight, invert to cool.

Puree of Lima Bean Soup

Soak 5 pounds of lima beans over night. In the morning drain, add fresh water and cook until tender. Then press through the puree sieve, or colander; the puree sieve is much better for this purpose. (The puree sieve is a flat pan with a closely perforated bottom.) The consistency of the bean pulp will depend upon the quantity of water in which the beans were cooked. Put the pulp into bottles or jars, add 1 teaspoonful of salt to the quart. Put rubbers and covers on jars and partially seal. (Cap and tip tin cans.) Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit	90 minutes
Water-seal outfit	75 minutes
Steam pressure outfit, 5 lbs. steam	60 minutes

Turn out fire, open canner, remove jars and seal, or if bottles are used, press the corks down well and dip one-fourth inch of the neck of the bottle in sealing wax.

Puree of Split Pea Soup

Make over the preceding recipe; add a little minced onion to the pea pulp.

Any of the dry beans, peas or lentils may be prepared and canned as directed in the recipe for Puree of Lima Bean Soup.

If the pulp is rather stiff when it goes into the jars

it will make a splendid substitute meat loaf by adding to the quart of pulp, 2 eggs, 1 cupful cracker crumbs, 1 minced onion, ¼ cupful meat drippings, and baking in the oven for ½ hour.

CANNING MEATS

The various methods of curing meats are so satisfactory and the system of cold storage is so perfect to-day that a woman finds little occasion for canning meats when living in the city. If living in the country or small village, the situation is somewhat different. In the country and small villages many families kill their own meat. In this way a large quantity of the meat must be preserved for future use. Only a small portion can be eaten while it is strictly fresh, and the remainder must be cured or preserved by some method which will keep it indefinitely. Under such conditions some of the meat should be canned, since there is no better method of keeping it.

Canned Beef

Twenty-four hours after the beef has been killed, cut it up. Put the amount that is to be canned into kettles and cook for 1 hour. Remove from kettles and cut in small pieces. Discard the bone and fat. Pack in jars, then fill them with the liquid from the kettle. Add 2 teaspoonfuls of salt to the quart. Put the rubbers and covers in place, and partially seal. (Cap and tip tin cans.) Put in the canner at once.

TIME FOR STERILIZING

Hot water bath outfit	4 hours
Water-seal outfit	4 hours
Steam pressure outfit, 5 lbs. steam	3½ hours

Remove, seal tight, and invert to cool.

Canned Pork

Allow meat to cool for twenty-four hours after the animal has been killed. Can only the lean portions; the loin, the hams and the shoulders are best for canning. Roast the meat in the oven for 1 hour. Then cut in slices and pack in sterile jars. Salt it as it goes into the jars and add a little pepper if desired. Fill the cans with the rich liquid from the roaster. Put the rubbers and covers in place, partially seal.

TIME FOR STERILIZING

Hot water bath outfit	4 hours
Water-seal outfit	4 hours
Steam pressure outfit, 5 lbs. steam	3½ hours

Remove and seal tight.

Fried Bacon and Sausage

A reliable way to preserve bacon and sausage is the old-fashioned method of frying it and packing it down in lard. The day following butchering, fry the sausage and bacon in large skillets on the stove or in large pans

in the oven. Fry just the same as if for serving immediately. Pack the meat in earthen jars and keep filling the jar with the lard that fries from the meat. When the jar is filled with the meat, cover it well with hot lard. Set away to cool. Then tie paper or cloth over the top and set in a cool place until wanting to use it. Meat can be kept in this way until midsummer, but personally I do not consider the meat as wholesome when prepared in this way as when it is cured or canned.

Canned Chicken

Kill, and dress the chickens at once. Cool. Joint, put in kettle and cook until tender. Remove from kettle and separate the meat from the bones. Pack closely in glass jars. Add 2 teaspoonfuls of salt to the quart. Pour over the meat the stock from which the fat has been skimmed. Put the rubbers and cover in place, partially seal.

Time for Sterilizing

Hot water bath outfit	3½ hours
Water-seal outfit	3½ hours
Steam pressure outfit, 5 lbs. steam	3 hours

Turn out fire, open canner, remove jars, seal immediately, and invert to cool.

Canned Wild Duck and Other Game

Dress the ducks or game as soon as brought in. Allow to cool for several hours. Carefully wash and joint. Put into kettle, cover with water and cook until tender or roast in the oven. (The author prefers roasting the meat.) Separate the meat from the bones, pack in glass jars. Add 1 rounding teaspoonful of salt to the quart, fill the jars with the boiling hot stock from which the fat has been skimmed. Put the rubbers and covers in place, partially seal.

TIME FOR STERILIZING

Hot water bath outfit	3½ hours
Water-seal outfit	3½ hours
Steam pressure outfit, 5 lbs. steam	3 hours

Turn fire out, open canner, remove jars and immediately seal.

In the Northwest and other sections of the country where wild duck or other wild fowl is plentiful, a gunner will often bring in a score or more of birds, and in no other way can the surplus meat be preserved and remain so excellent as when roasted and canned.

FRUIT

Fruits may be canned by the open kettle method, the cold water or the cold pack method.

The most commonly used of these methods is the open kettle, when the fruit is completely cooked and sterilized in the preserving kettle before being put in cans and finally sealed. This is not the best method because of the chances of germs and spores entering the jars before they are sealed.

The cold water method is used for such fruits as rhubarb and green gooseberries, and consists of blanching the fruit in boiling water for one minute, then packing it in jars and covering it with cold water and sealing. There is no particular advantage in this method except when the fruit is to be used for pies, because, if cooked when canned, it is ready to serve when opened.

The cold pack method is the one the author recommends. By this method one can accomplish more and the results are better. The method consists in washing and blanching the fruit, dipping in cold water, packing in jars, and pouring hot sirup or hot water over. The jars are then partially sealed and sterilized. After removing the jars from the canner the lids are tightened immediately. If the sterilizing is properly done there is no chance of spoilage, providing the cans are perfect and are perfectly sealed.

When fruits are purchased for canning purposes, it is false economy to buy fruits that are fast on the road to decay just because they are offered at bargain prices.

Making Sirups for Fruits

In canning factories a thermometer or gauge is used to test or determine the density of the sirups. In this way the sirup is uniform for each particular brand put up. For trade purposes it is very essential that this be done, especially with the better grade of products. It would be disappointing, and a customer would be inclined to lose faith in any brand of goods that was not uniform in quality and flavor. With the housewife, this exactness is not called for. To be sure, some accurate rule should be followed. A formula desirable for the housewife is 3 quarts of sugar to 2 quarts of water, boiled to a thin, or medium sirup. For most fruits the thin sirup should be used. For plums, peaches, and quinces, when the fruit is to be used for dessert instead of pie filling, the medium sirup will appeal to most people.

Thin sirup is that which has been boiled sufficiently to dissolve all the sugar, but is not sticky.

Medium sirup is that which has been boiled sufficiently to make it sticky and cling to the spoon slightly when poured from the spoon.

CANNING FRUITS WITHOUT SUGAR

Some women will hesitate to can fruits this summer because of the price of sugar, and because the quantity required in canning is quite an item of expense. Of course, it is plain to everyone that the sugar bought this summer and added to canned fruits means just that much less to buy next winter. If commercial canned fruits are purchased, the consumer must always pay an extra high price for the sugar the canner puts into the can, so it would seem that the situation is about as broad as it is long. The consumer must pay for the sugar no matter how or when it is purchased.

If it is a matter of not being able to buy a large quantity of sugar at any one time, do not allow that to interfere with your canning campaign. Can the fruits without sugar. Some women seem to think that in order to have fruit keep, the addition of sugar is absolutely essential. This is entirely an erroneous belief. The sugar has nothing to do with the keeping qualities of fruit unless boiled down to the consistency of preserves. Fruit may be canned just as successfully without as with sugar, and about the only difference is that sugar must be added when the fruit is opened, instead of having been added when the fruit was canned.

Some people like fruit better if canned with the sugar added; but other people are firm in their belief that

when fruit is canned without sugar, and then opened and the sugar added about four hours before serving, that the fruit has a fresher and milder flavor.

Instead of adding sugar or sirup to the fruit, simply add boiling water and proceed as recipes direct.

When canning fruit for pie filling there is an added advantage in canning it without sugar. If sugar is added and a can should spoil, not only the fruit is lost, but the sugar which went into it is also lost; hence it is the part of economy to can without sugar all fruits which are likely to be used for pie filling.

Canned Baked Apples

Select tart apples, wash thoroughly, and with a sharp knife or regular apple corer remove the cores. Place the apples side by side in a granite or an aluminum pan. Put 1 tablespoonful of sugar in the cavity of each apple. Put a little boiling water in the pan, place in the oven and bake until tender. Remove, and put the apples in sterile jars. Fill the cans with the thin sirup in the pan, and should there not be enough make some extra sirup. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans in the canner.

TIME FOR STERILIZING

Hot water bath outfit	15 minutes
Water-seal outfit	12 minutes

Steam pressure outfit, 5 lbs. steam..... 8 minutes

Turn out fire, open canner, remove cans, seal immediately and invert to cool.

Cobbled Apples

Use tart apples, and if possible secure a red variety and do not peel. Cut the apples in quarters and core. Put into a preserving kettle, and cover with water. For each cupful of water add 2 cupfuls of sugar. Cook the apples over a very slow fire until they are easily pierced. Put into sterile jars and fill the jars with the sirup in which the apples were cooked. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into canner.

TIME FOR STERILIZING

Hot water bath outfit..... 10 minutes
Water-seal outfit ..... 8 minutes
Steam pressure outfit, 5 lbs. steam..... 6 minutes

Turn fire out, open canner, remove jars, seal tight immediately, and invert to cool.

Apple Sauce Canned

Use tart apples; core but do not peel. Put into a preserving kettle, add a little water, cover and cook until tender. Then press through a puree sieve or colander through which the peel of the apples will not pass. Add

sugar to sweeten. Put in sterile jars. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put in canner.

TIME FOR STERILIZING

Hot water bath outfit	12 minutes
Water-seal outfit	10 minutes
Steam pressure outfit, 5 lbs. steam	8 minutes

Turn out fire, open canner, remove jars, seal tight and invert to cool.

Apples for Pie Filling

Pare and cut the apples in sections lengthwise. Drop into cold water as fast as they are prepared. Pack them in sterile jars as tight as possible. Fill the jars with boiling water. Put the rubbers and covers in place and partially seal. (Cap and tip tin cans.) Put the cans into the canner.

TIME FOR STERILIZING

Hot water bath outfit	20 minutes
Water-seal outfit	15 minutes
Steam pressure outfit, 5 lbs. steam	12 minutes

Apples for Salad

Core and quarter the apples. Pack them closely into jars. Fill the jars with thin sirup. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner.

TIME FOR STERILIZING

Hot water bath outfit	15 minutes
Water-seal outfit	12 minutes
Steam pressure outfit, 5 lbs. steam	10 minutes

Turn fire out, open canner, remove cans, seal tight immediately, and invert to cool.

Apricots

Select fruit that was ripe when picked. Wash or wipe thoroughly with a damp cloth. Cut in halves and remove pits. Pack in jars and pour over a rather heavy sirup. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put in the canner.

TIME FOR STERILIZING

Hot water bath outfit	25 minutes
Water-seal outfit	20 minutes
Steam pressure outfit, 5 lbs. steam	15 minutes

Turn fire out, open canner, remove jars, seal tight and invert to cool.

Apricots and Pineapple

Wash or wipe the apricots with a damp cloth. Cut in halves and remove pits. Peel and cut the pineapple in cubes. Blanch in boiling water for five minutes, dip into cold water. Pack the jars with three parts apricots and one part pineapple. Fill the jars with a medium sirup. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put in canner.

TIME FOR STERILIZING

Hot water bath outfit	35 minutes
Water-seal outfit	30 minutes
Steam pressure outfit, 5 lbs. steam	25 minutes

Turn out fire, open canner, remove jars, seal tight and invert to cool.

Apples and Quinces

Pare and quarter equal parts of apples and quinces. Put equal parts of sugar and water in a preserving kettle, bring to the boiling point. Add the quinces to the sirup and cook for 10 minutes. Take from the sirup and pack equal portions of the apples and the quinces in the jars. Fill the jars with the boiling sirup. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into canner.

TIME FOR STERILIZING

Hot water bath outfit	20 minutes
Water-seal outfit	15 minutes
Steam pressure outfit, 5 lbs. steam	12 minutes

Remove, and seal tight. Invert to cool.

Blackberries

Blackberries should be picked and canned the same day. Wash thoroughly and pick off all stems and leaves. Pack in jars and pour over a sirup made of 3 parts sugar and 2 parts water boiled 1 minute. Put the

rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans in the canner.

TIME FOR STERILIZING

Hot water bath outfit	16 minutes
Water-seal outfit	12 minutes
Steam pressure outfit, 5 lbs. steam	8 minutes

Turn out fire, open canner, remove cans and tighten covers. Invert to cool.

If the blackberries are intended for pies, fill the jars with boiling water instead of syrup.

Open Kettle Method

Wash the blackberries carefully. Put them into a preserving kettle. For every quart of berries, add 1 cupful of sugar. Heat the berries slowly and boil 8 minutes after they reach the boiling point. Put into sterile jars or tin cans and seal immediately.

If the berries are to be used for pies, it is advisable to omit the sugar and then sweeten them when put into the pies. Sugar added to fruit has nothing to do with its keeping, except when cooked to the consistency of preserves.

Cherries

Pit the cherries, or can them with the seeds in as preferred. If the cherries are to be used for pies they should be pitted, but if they are to be served as a fruit

dessert many people enjoy the flavor more if the pits are not removed, or at least not all of them.

Pack the cherries in sterile jars. Fill the jars with a thin or medium thick sirup as desired. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit	18 minutes
Water-seal outfit	15 minutes
Steam pressure outfit, 5 lbs. steam	12 minutes

Turn fire out, open canner, remove jars and seal immediately. Invert to cool.

If the cherries are to be used for pies, there is no occasion to sweeten them when they are canned. The sugar can be added when they are put into the pies.

Open Kettle Method

Wash and stem and pit the cherries. Put them into the preserving kettle. For every quart of cherries add 2 cupfuls of sugar, or if they are being canned without sugar add a little water to start them. Bring to the boiling point and cook for 10 minutes after they start to boil. Put into sterile jars. Put the rubbers and covers in place as the jars are filled and seal tight. If tin cans are used they should be lacquered or enamel lined. Cap and tip them as fast as they are filled. If possible two

people should work if tin cans are used. One should fill the cans and the other cap and tip them.

Crab Apples

For canning purposes the crab apples should be ripe, but not over-ripe or they will break up and also have a very inferior flavor.

Select sound, unblemished crab apples. Wash and remove the blossom, but allow the stem to remain. Put the apples into the jars. Cover them with a heavy sirup. Put the rubbers and covers in place. Partially seal. (Cap and tip tin cans.) Put the cans into the canner.

TIME FOR STERILIZING

Hot water bath outfit	20 minutes
Water-seal outfit	18 minutes
Steam pressure outfit, 5 lbs. steam	15 minutes

Turn out fire, open canner, remove cans and seal tight immediately. Invert to cool.

Open Kettle Method

For this particular fruit the author prefers the open kettle method.

Wash the apples, remove the blossom ends and put into a large preserving kettle. Not more than two quarts should be prepared at one time if one desires to have the apples unbroken. To every quart of apples add 2 cupfuls of sugar, and ½ cupful of water. Bring the apples

slowly to the boiling point. Cook until they can be easily pierced. Put into sterile jars. Put rubbers and covers in place and seal tight immediately. If tin cans are used they should be lacquered or enamel lined.

Pickled Crab Apples

Prepare over above recipe using the open kettle method and add ½ cupful of vinegar to the quart. Spice with cinnamon and cloves.

Currants

The currant is a fruit especially suitable for pies, sauces, preserves and jellies.

Stem and wash the currants. Pack into sterile jars. Cover with a hot, thin syrup, or add boiling water if preferred. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit	15 minutes
Water-seal outfit	12 minutes
Steam pressure outfit, 5 lbs. steam	10 minutes

Turn the fire out, open canner, remove cans, seal tight immediately. Invert to cool.

Cranberries

For those who desire to serve cranberries on different occasions during the year, there is a decided advantage

in canning the berries in the fall and early winter when this fruit is most plentiful. The sauce when canned will be just as nice when opened as the fresh sauce is.

Select fresh, firm berries. Do not buy berries that are beginning to decay. All soft and decayed berries must be discarded. To each quart of berries add 1 cupful of water and 3 cupfuls of sugar. Put them over the fire and cook until the berries burst. Then remove and put the berries into the jars. Boil down the sirup to the desired consistency. Fill the cans with it. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner.

TIME FOR STERILIZING

Hot water bath	12 minutes
Water-seal outfit	10 minutes
Steam pressure outfit, 5 lbs. steam	8 minutes

Turn out fire, open canner, remove cans and seal immediately. Invert to cool.

If one desires to reject the skins and have a perfectly smooth sauce, the berries should be pressed through a puree or wire sieve and then returned to the liquid and cooked until it congeals slightly upon cooling.

Dewberries

The dewberry is a variety of blackberry. It grows on vines that run close to the ground. The bushes are

smaller but the berries are usually larger than the average blackberry. They have a fine flavor and they are excellent for desserts or pies. The berries should be fresh. If possible they should be canned the same day they are picked. Wash the berries in cold water and pick them over carefully. Pack them in sterile jars. Make a sirup by bringing to the boiling point 2 cupfuls of sugar and 1 cupful of water. If a medium heavy sirup is desiderd, boil the sirup for a few minutes. Pour the boiling sirup over the berries and fill the cans even full. Put the rubbers and covers in position, partially seal. (Cap and tip tin cans.) Put the cans in the canner.

TIME FOR STERILIZING

Hot water bath outfit	16 minutes
Water-seal outfit	12 minutes
Steam pressure outfit, 5 lbs. steam	8 minutes

Turn out fire, open canner, remove cans, seal tight and invert to cool.

Open Kettle Method

Select fresh berries. Wash them and pick them over carefully. Put the berries in a preserving kettle, and to each quart of berries add 1 cupful of sugar, or more if one desires to have them real sweet. Add a little water, put them over a slow fire and bring to the boiling point. Cook for eight minutes after they begin to boil. Put into sterile jars. Put the rubbers and covers in place

and seal immediately. If tin cans are used, cap and tip them immediately after they are filled.

If desired, the fruit may be canned without sugar.

Elderberries

Elderberries have never become popular enough to warrant their extensive cultivation. The supply is limited almost exclusively to the wild berries. They are however greatly esteemed by some people, being used principally for pies, for which purpose they are indeed excellent.

Pick the berries from the stems and wash carefully. Pack in sterilized jars and fill the jars with hot, thin sirup or boiling water. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans in the canner.

TIME FOR STERILIZING

Hot water bath outfit	20 minutes
Water-seal outfit	16 minutes
Steam pressure outfit, 5 lbs. steam	12 minutes

Turn fire out, open canner, remove cans, seal tight and invert to cool.

To cook a few green grapes with the berries will improve their flavor.

Open Kettle Method

Clean and wash the berries. Put them into a preserv-

ing kettle and to each quart of berries add 1 cupful of green grapes and 1 cupful of sugar, or a little water if they are being canned without sugar. Bring the berries to the boiling point and cook for 12 minutes after they begin to boil. Put into sterile jars. Put the rubbers and covers in place and seal tight. If tin cans are used, cap and tip as soon as they are filled.

Figs

The fig is one of the most valuable fruits we have, and it is unfortunate that its production is so limited that the price of commercial canned figs is so high that families of modertate means are compelled to rate them as a luxury.

Figs put up in sirup make one of the choicest of desserts, and their value is two-fold in that they possess excellent laxative properties as well as being rich in carbohydrates.

Canned Figs

Select figs that are ripe, but not so ripe that they show evidence of decay. Wash them carefully, but do not break off the stems. Drop them in boiling water and cook for 12 minutes. Remove and pack them in jars. Pour over them a sirup made of 2 parts sugar and 1 part water brought to the boiling point and boiled for 4 minutes. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans in canner.

TIME FOR STERILIZING

Hot water bath outfit	40 minutes
Water-seal outfit	35 minutes
Steam pressure outfit, 5 lbs. steam	30 minutes

Turn out fire, open canner, remove cans, seal tight and invert to cool.

Figs may be canned in water instead of sugar but the flavor is not nearly so pleasing.

Gooseberries

While washing the gooseberries rub them between the hands to remove the blossom ends. To 5 quarts of fruit add 3 pints of sugar. Put in a preserving kettle, add a little water and bring to the boiling point. Cook for 10 minutes after they begin to boil. Put in jars and put covers and rubbers in place, partially seal. Put in canner.

TIME FOR STERILIZING

Hot water bath outfit	8 minutes
Water-seal outfit	7 minutes
Steam pressure outfit, 5 lbs. steam	6 minutes

Turn out fire, open canner, remove cans, seal tight, and invert to cool.

Do not put gooseberries in tin cans.

GRAPES

No fruit has a wider range of habitation than the grape. In nearly all parts of the world one or more of the numerous varieties of the grape family can be found, either in the wild or cultivated form. It is a fruit of rare qualities, and should be preserved more largely than it is for winter use.

Grapes

Select one of the choice varieties. The old Concord cannot be excelled for home canning purposes. Pick the grapes from the stems and wash. With the fingers squeeze the pulp from the skins. Put the pulp into the preserving kettle and cook for 10 minutes. Pour into puree sieve and press through, rejecting the seeds. Put the pulp back into the preserving kettle and add to it the skins. To each quart of pulp add from 1 to 2 cupfuls of sugar, depending on how sweet one wants to make them. Cook for five minutes after reaching the boiling point. Put into sterile jars. Put the rubbers and covers in place, partially seal. Put into canner.

TIME FOR STERILIZING

Hot water bath outfit	12 minutes
Water-seal outfit	10 minutes
Steam pressure outfit, 5 lbs. steam	8 minutes

Turn out fire, open canner, remove jars, seal tight and invert to cool.

Open Kettle Method

Proceed as directed above, except that after the pulp, skins and sugar have been put into the preserving kettle, the cooking should be continued 10 minutes after reaching the boiling point instead of five. Seal the jars tight as soon as they are filled.

Grapes usually keep well canned by the open kettle method, but a short period of sterilization after the fruit is in the cans is almost certain to prevent any loss whatever from spoilage unless the sealing of the cans has been defective.

Grapes Canned with the Seed in

Stem and wash the grapes. Plunge them into hot water (not quite boiling) for 2 minutes. Turn into sieve and drain water off. Pack in jars and pour over a thin, hot sirup. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner.

TIME FOR STERILIZING

Hot water bath outfit	16 minutes
Water-seal outfit	12 minutes
Steam pressure outfit, 5 lbs. steam	10 minutes

Turn fire out, open canner, remove jars and seal tight. Invert to cool.

Spiced Grapes

Wash the grapes, and remove the skins from the

grapes. Cook the pulp in a preserving kettle until tender, then press through a puree sieve that will not allow the seeds to pass through. Return the pulp to the kettle, add the skins, and to each quart of the grapes add 2 cupfuls of sugar, ½ cupful of vinegar, ½ teaspoonful grated nutmeg, ½ teaspoonful ground cloves. Cook slowly for fifteen minutes. Put in sterile jars, put rubbers and covers in place, and seal tight.

Huckleberries

Wash and reject any soft berries. Pack them in jars and cover with a thin sirup. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into the canner.

TIME FOR STERILIZING

Hot water bath outfit	20 minutes
Water-seal outfit	18 minutes
Steam pressure outfit, 5 lbs. steam	15 minutes

Loganberries

The loganberry is a comparatively new fruit, but has won for itself unusual popularity. It is the product of the raspberry and the blackberry crossed. It has a distinctly pleasing flavor, and for pies or to serve as a dessert is excellent.

It is grown largely on the western coast. In Oregon its cultivation is very extensive. The juice of the logan-

berry is considered equal to grape juice, and is put up in bottles and sold commercially. The demand for this product exceeds the output, which is an indication of its quality and flavor.

Canned Loganberries

Select fresh berries. Wash and pick them over carefully. Pack in jars, and cover with a heavy sirup if the berries are to be served as dessert, or with boiling water if the berries are to be used for pie filling. Sirup should be made of 3 parts sugar and 1 part water boiled 4 minutes. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put cans into canner.

TIME FOR STERILIZING

Hot water bath outfit	20 minutes
Water-seal outfit	15 minutes
Steam pressure outfit, 5 lbs. steam	12 minutes

Turn fire out, open canner, remove cans, seal tight, and invert to cool.

Open Kettle Method

Select fresh berries. Wash and pick them over carefully. Put them into a preserving kettle and to every quart of berries add 1 cupful of sugar, or more if desiring to have them very sweet. Add just a little water and bring slowly to the boiling point. Cook for 12 minutes after they start to boil. Put in sterile jars, put rubbers

and covers in place and seal tight as fast as the jars are filled. If tin cans are being used, cap and tip them immediately.

If the berries are to be used for pie filling the better plan is to can them without sugar.

Oranges

In localities where the supply of oranges is continual and the prices are not too exorbitant, there is little necessity for canning oranges; but in localities where oranges cannot be secured at all seasons at reasonable prices and in localities where they are grown, there is a great advantage in canning them. The windfalls may be used for canning purposes, and in the orange producing sections or where the windfalls can be purchased at very low prices, they should be canned. Use only seedless varieties for canning whole.

Peel the oranges and remove all the white part of the peel. Either slice them or put them in the jars whole, and cover them with a sirup made of 2 parts sugar and 1 part water boiled 4 minutes. It is possible to get a great deal more orange in the jars if sliced. Put the rubbers and covers in place, partially seal. Put into canner.

TIME FOR STERILIZING

Hot water bath outfit	15 minutes
Water-seal outfit	12 minutes

Steam pressure outfit, 5 lbs. steam..... 10 minutes

Turn fire out, open canner, remove jars and seal tight. Invert to cool.

Open Kettle Method

Use windfalls if they are on the market. Peel the oranges, removing all the white portion of the peel. Slice or put in the preserving kettle whole. For every quart of oranges add 1 cupful of sugar. Bring to the boiling point, and cook 15 minutes after starting to boil. Put in sterile jars and seal tight immediately. If the oranges are very sour, more sugar should be added.

Peaches

Select good quality fruit. Don't buy culls and partially decayed fruit at bargain prices thinking it economy. The big waste in such fruit more than balances the reduction in price.

Wash the peaches in cold water. With a sharp knife pare very thin. Put in sterile cans whole, in halves or sliced, as preferred. Fill the jars with a sirup made of 3 parts sugar and 2 parts water boiled 4 minutes. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put cans in canner.

TIME FOR STERILIZING

Hot water bath outfit..... 16 minutes
Water-seal outfit ..... 12 minutes
Steam pressure outfit, 5 lbs. steam..... 10 minutes

Turn out fire, open canner, remove cans, seal tight and invert to cool.

Open Kettle Method

Pare the peaches very thin. Allow them to remain whole, divide them into halves or slice them, as preferred. Put the peaches into the preserving kettle, and to every quart of peaches add 1 cupful of sugar or more if preferred real sweet. Add a little water and bring the fruit to the boiling point. Cook for sixteen minutes after starting to boil, or if the peaches are whole, cook them until tender. The time for cooking will vary according to the ripeness and quality of the peaches. When the cooking period is completed, put them into sterile jars immediately. Put the rubbers and covers in position and seal at once. If tin cans are used, cap and tip as soon as filled.

The density of the sirup on peaches or any other fruit should be regulated by the housewife. Some people prefer a very thin sirup while others desire a very heavy sirup, so it would be impossible to make the instructions in a recipe fulfill the requirements of every family. A woman should depend upon her own judgment in the matter of sweetening fruits.

Pears

The Bartlett and the Kiefer varieties are splendid varieties for canning. The Bartlett comes on the market

earlier than the Kiefer and most people prefer it. Peel the pears, cut them in halves and remove the core. Pack them in jars, and cover with a thin sirup. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put the cans into the canner.

TIME FOR STERILIZING

Hot water bath outfit	20 minutes
Water-seal outfit	18 minutes
Steam pressure outfit, 5 lbs. steam	15 minutes

Turn out fire, open canner, remove cans and seal tight, invert to cool.

Open Kettle Method

Peel the pears, cut them in halves and remove the cores. Put them in the preserving kettle and to every quart of pears add 1 cupful of sugar. Cook until they are easily pierced. Put in sterile jars. Put rubbers and covers in position and seal tight. If tin cans are used, cap and tip as soon as they are filled.

Pineapple

It is not profitable to can pineapple except during the season when they are cheap. In the north they are usually lowest in price during the months of May and June. If large pineapples cannot be purchased for less than 15 cents apiece, the commercial canned product is less expensive.

Select pineapples that are well ripened, but not ripened to the extent that decayed spots are apparent. With a sharp knife remove the peel. This is easiest and quickest done by holding the pineapple by the top, resting the other end on a board and then cutting down towards the board. With a sharp, pointed knife remove the eyes. After it is peeled, slice and cut out the heart or cut in cubes. When canning for home use the better plan is to cut the fruit in cubes. Pack in jars, fill the jars with a hot sirup made of 3 parts sugar and 1 part water boiled 3 minutes. Put the rubbers and covers in place, partially seal. Put in canner.

TIME FOR STERILIZING

Hot water bath outfit	35 minutes
Water-seal outfit	30 minutes
Steam pressure outfit, 5 lbs. steam	25 minutes

Turn fire out, open canner, remove cans, seal tight and invert to cool.

Open Kettle Method

Peel the pineapple as directed in the preceding recipe. Slice it, cut in cubes or grate, as desired. Putting it through the food chopper is the easiest and fastest way of grating it. Put the pineapple in the preserving kettle, and for every quart of pineapple add 1 cupful of sugar, or more if preferred sweeter. Cook for 20 minutes or longer if not tender at the end of that period. Put in sterile jars and cover with sirup from the kettle.

Put the rubbers and covers in place, and seal tight at once. If tin cans are used, they should be of the lacquered or enamel-lined types.

Plums

Wash the plums thoroughly. Cut them in halves and remove the pits, or can them whole if preferred. Blanch by covering them with boiling water for 1 minute. Remove and plunge into cold water.

Pack tight in the jars and cover with a sirup made of 3 parts sugar and 1 part water boiled 3 minutes. Put the rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put into canner.

TIME FOR STERILIZING

Hot water bath outfit	16 minutes
Water-seal outfit	14 minutes
Steam pressure outfit, 5 lbs. steam	12 minutes

Turn out fire, open canner, remove jars, seal tight and invert to cool.

Open Kettle Method

Wash the plums, and put into the preserving kettle. To every quart of plums add from 1 to 2 cupfuls of sugar according to the acidity of the plums. Cook them until tender, which will be about 16 minutes. Put in sterile jars and seal tight immediately.

If it is desired that the plums remain as nearly whole

as possible, not more than 2 quarts should be cooked in the kettle at a time, and the kettle should be large so the fruit will not be very deep in it.

Canned Quinces

Peel, divide and core the quinces. Blanch them in boiling water for 1 minute. Remove and plunge into cold water. Pack closely in the jars, and cover with a medium heavy sirup made of 3 parts sugar and 1 part water boiled 1 minute. Put the rubbers and covers in place, partially seal. Put in canner.

TIME FOR STERILIZING

Hot water bath outfit	30 minutes
Water-seal outfit	25 minutes
Steam pressure outfit, 5 lbs. steam	20 minutes

Turn out fire, open canner, remove jars, seal tight and invert to cool.

Open Kettle Method

Peel, divide and core the quinces. Put them in the preserving kettle, and for every quart of fruit add 1 cupful of sugar, or more if desired, and a little water. Cook until tender enough to be pierced easily with a fork. Put in sterile jars and cover with the sirup in the kettle. Put rubbers and covers in place and seal tight.

Raspberries

Wash the berries carefully and pick them over. Pack in jars and cover with a thin sirup made of 2 parts sugar and 1 part water boiled 4 minutes. Put rubbers and covers in place, partially seal. (Cap and tip tin cans.) Put in canner.

TIME FOR STERILIZING

Hot water bath outfit	16 minutes
Water-seal outfit	14 minutes
Steam pressure, 5 lbs. steam	12 minutes

Turn out fire, open canner, remove jars, seal tight and invert to cool.

Open Kettle Method

Wash and pick the berries over carefully. Put into preserving kettle, and for each quart of berries add 1 cupful of sugar. Cook for 16 minutes. Put in sterile jars. Put rubbers and covers in place, and seal tight. If tin cans are used cap and tip them at once.

Rhubarb

Wash the stalks but do not peel. The peel is the most medicinal part of the rhubarb. Put in the preserving kettle and for every quart of fruit add 2 cupfuls of sugar. Cook for 10 minutes after it reaches the boiling point. Put into sterile jars. Put rubbers and covers in place and seal tight. Rhubarb should not be canned in tin cans.

Cold Water Method

Wash the rhubarb and blanch it in boiling water for 1 minute. Remove and plunge into cold water. Cut the stems the length of the can and pack in tight. Cover with cold water and seal tight at once. The water added to the cans should be boiled and cooled before putting it on the rhubarb. There is little or no advantage in this method.

Strawberries

The author does not recommend canning strawberries by the cold pack method because they shrink so when put in the cans raw and covered with sirup. The berries always rise to the top of the jar, leaving the jar less than half filled with the fruit. Partial cooking before putting them in the jars is preferable.

Stem and wash the berries. Put them in the preserving kettle and for every quart of berries add 1 cupful or more of sugar and ⅛ cupful of water. Bring to the boiling point very slowly. As soon as the berries have collapsed, when boiled about 2 minutes, pack them in the jars and cover with sirup from the kettle. Put rubbers and covers in place, partially seal. Put in canner.

Time for Sterilizing

Hot water bath outfit	8 minutes
Water-seal outfit	6 minutes
Steam pressure outfit, 5 lbs. steam	5 minutes

Method No. 2

Wash and stem the berries. Put them in the preserving kettle, and for each quart of berries add 1 cupful or more of sugar, and ⅛ cupful of water. Bring to the boiling point and cook slowly for 5 minutes. Place the kettle in cold water to cool. Allow the berries to get thoroughly cold, then pack in jars, and cover with sirup. Put the rubbers and covers in place, partially seal. Put in canner.

TIME FOR STERILIZING

Hot water bath outfit	8 minutes
Water-seal outfit	6 minutes
Steam pressure outfit, 5 lbs. steam	5 minutes

Turn fire out, open canner, remove cans, seal tight and invert to cool.

By this method one can get a solid pack of berries in the cans. Not more than 2 or 3 quarts should be cooked in the kettle at a time. Hence if a large quantity of berries is to be canned 2 or 3 kettles should be used, or the directions in the first recipe should be followed.

FRUIT BUTTERS, JAMS, JELLIES, PRESERVES AND CONSERVES

Although these sweet meats are not essential to health or good living, they are held in high esteem by most people. Their unusual and delicious flavors render them acceptable additions to almost any meal.

They are a highly concentrated form of food, and are classified as carbohydrates. Foods of this character should be eaten in small amounts, otherwise they are a tax upon digestion.

Large stores of these sweet meats should be put up by housewives this summer, for in no better way can the men in the trenches be remembered than by sending them an occasional box of such supplies from mother's cupboard. They can fight harder and more valiantly when they are reminded that the home folks are thinking of their hardships. By all means put up a supply of these dainties for the boys in khaki.

Making jellies, jams and preserves is a very simple task, but to secure uniform results the work must be done by rule. Guess work gives no assurance of success.

Making Jellies

There is always an element of uncertainty encountered when a woman starts to make jelly. So many influences enter into the final results that women are often perplexed to know why on one occasion they are entirely

successful while at other times the same method and rules bring different results. Sometimes jelly refuses to congeal, and then the unsuccessful woman worries because of her ill luck. Sometimes it gets too stiff, and then she laments because her jelly is not of first quality.

To understand the causes of such results one must understand something about the characteristics of fruit juices and how those characteristics are affected by conditions of the weather while the fruit is growing and by the handling of the fruit.

Fruit juices will not jell unless the property called pectin (a starchlike substance) is present. It is because of the absence of this substance that some fruit juices refuse to jell. There are several ways by which to determine the presence of pectin in fruit juices, but the best plan is for the housewife to know the fruits that contain sufficient pectin to make the juices when combined with sugar and boiled, turn into a gelatinious mass, or jell.

If one is not certain that the juice contains sufficient pectin, it is well to make the following test: Put into a glass 2 teaspoonfuls of the juice to be tested and 1 teaspoonful of grain alcohol; allow to stand 30 minutes. If sufficient pectin for making jelly is present, a jelly-like substance will form in the bottom of the glass.

The juice of the following fruits will always jell: Tart apples, blackberries, currants, grapes, loganberries, quinces, raspberries. If a fruit juice contains an insuf-

ficient amount of pectin, it may be introduced by cooking with the juice the white portion of orange peel, or the peel of tart apples. Of course this modifies the flavor of the fruit juice, but it does not necessarily detract from the flavor of the jelly.

If the strength of a fruit juice is reduced by an undue amount of water, difficulties in making it jell will be experienced. Hence, blackberries, raspberries and loganberries should not be cooked with very much water, nor should they be allowed to stand long in water when being washed. They absorb so much water that the juice is diluted, and more boiling is necessary to reduce it to the required point. These fruits should not be gathered soon after an extended rainfall if they are to be used for making jellies.

Do not make the mistake of trying to boil too much juice and sugar down at one time. Of course the amount must depend somewhat upon the size of the preserving kettle being used, but in any event, juice and sugar sufficient to make five or six glasses of jelly is all that should be cooked at one time. A larger quantity in the kettle requires an extended period of boiling, and the jelly is not so satisfactory in color or flavor, as it becomes darker in color, and the flavor becomes strong.

The jelly should be skimmed as necessary. This can be done more easily if the fire is turned down to prevent rapid boiling for a minute or two.

Do not press the juice from the jelly bag when draining fruit juice, or the jelly will be cloudy.

Put the jelly glasses in a pan of water, and bring to the boiling point. Remove the glasses just before filling, and there is no danger of breaking when pouring the hot jelly or jam into them.

Testing Jellies

To determine just when a jelly has boiled enough is one of the difficult problems for the housewife. A thermometer can be used very successfully, but since few women have a thermometer or a gauge with which to test fruit juices they must rely upon some other less accurate method. Most jellies are done when the thermometer registers 220 degrees Fahrenheit.

After a little experience one is able to tell by the size and persistency of the bubbles as the jelly boils, just when it is done. The following test is very certain and simple: Drop a little of the boiling jelly on a cold saucer. Hold the bottom of the saucer in cold water, or if the air is cool take it outside. As soon as the sample is cool touch it lightly with a spoon and if a skin has formed on top the jelly must be taken from the fire at once. While the testing is being done, the fire should be turned low, for should the jelly boil a minute or two too long, it will be too stiff.

Apple Butter

Making apple butter of the best quality is confined mostly to the farm, where there is a plentiful supply of apples for cider. It is usually made in a large copper kettle, and the time required for completing the process is from eight to twelve hours, according to the amount of cider used.

Use good quality cider. Boil it down one-half. In the meantime wash, peel, quarter and core good quality apples which are not too sour. Add to the boiled-down cider an equal quantity of apples. As soon as the apples begin to cook up, begin to stir and stir constantly until the butter is finished. When the apples and cider have boiled down about one-half add the sugar. The amount to use will depend greatly upon the tartness of the apples and the cider—1 pound of sugar for every gallon of the butter is the amount often used. If a very sweet butter is wanted more sugar should be added. The smoothness of the butter will depend some upon the cooking qualities of the apples used. In any event the butter must be cooked until all the apples have been perfectly broken up. If the butter becomes too thick before it is entirely smooth, add a little more cider to thin it. The butter must be cooked until when a spoonful is put in a saucer, thin cider will not show around the edge. Just before removing add for each gallon of butter 1 tablespoonful of cinnamon and 1 tablespoon of allspice. Stir

the spice through well, then put into jars immediately. Apple butter made in this way will keep without sealing.

Apple Butter No. 2

Take equal parts of apples and cider. Pare, core and quarter the apples before measuring. Put the cider in one kettle and boil it down to one-fourth the original amount. Cook the apples in another kettle and press them through the puree sieve. Add the apples to the cider and cook to desired consistency. The butter must be stirred constantly after the apples are added to the cider. Add 1 pound of sugar for every gallon of butter. More sugar will be required if a very sweet butter is desired. The sugar may be added any time after the apples are put into the cider. Just after the butter is taken from the fire, add for each gallon of butter 1 rounding teaspoonful of each of the following spices: powdered cinnamon, allspice, cloves. Stir through the butter well, put into jars and seal. If the butter is boiled until when a spoonful is put in a saucer no thin cider gathers around the edge of the butter, it will keep without sealing.

Apple Jelly

Use tart apples that are not very ripe. Core but do not pare. Put them in the preserving kettle, and add just sufficient water to cover. Cook until the apples are tender. Turn them into a cheese cloth or muslin bag,

and hang them up to drain into a kettle. Put 8 cupfuls of the juice into a large preserving kettle, add to it 6 cupfuls of sugar. Boil until when a small portion is dropped in a cold saucer, a film forms over the top, which may be detected by drawing the side of a teaspoon lightly over the top. If the boiling is continued after the film will form, the jelly will be too stiff. Pour into jelly glasses, cool, and cover with paraffin.

Crab Apple Jelly

Make over the recipe for apple jelly.

Blackberry Jam

Wash the berries and pick them over carefully. Put 8 cupfuls of berries in the preserving kettle. Add 6 cupfuls of sugar and ½ cupful of water. Put over a slow fire and bring to the boiling point. Then cook very slowly to desired consistency. If a thermometer is used, it will register about 220° F. when the jam is done. If a thermometer is not used, the jam can best be tested by putting a little in a cold dish to cool. When cool it should have a thin jelly-like consistency. To eliminate the seeds in such a jam cook the berries first, and press them through a sieve. Return the fruit to the preserving kettle, then add the sugar and cook.

Blackberry Jelly

Put the berries in a preserving kettle, and add a little

water. Put over the fire and cook slowly until tender. Then pour into a cheese cloth or muslin jelly bag and hang up to drain. If a real clear jelly is desired, the juice should be re-filtered through two thicknesses of heavy muslin in order to remove all the sediment. For every quart of juice add 3 cupfuls of sugar, or if a very sweet jelly is preferred use equal amounts of juice and sugar. Put over the fire and boil. The time required to finish the jelly will depend upon the amount of juice being boiled, and the amount of heat under the kettle. (See instructions for testing jelly.) As soon as it is done pour into warmed glasses, cool and cover with paraffin.

Cherry Preserves

Select sour cherries. Wash and pit. Put into the preserving kettle equal amounts of the cherries and granulated sugar. Bring to the boiling point and cook slowly until done. They should be cooked until the sirup becomes heavy.

Another good method is to first put the sugar and 1/3 as much water in the preserving kettle. Boil to 240° F. or until the sirup forms a firm ball in cold water. Then drop the pitted cherries in, and cook until they become clear. Put into jars and seal.

Currant Jelly

Put the washed currants in the preserving kettle, and

for every quart of currants add ¼ cupful of water. Cook very slowly until tender. Then mash fine. Turn into a muslin or cheesecloth jelly bag and hang up to drain. It is a good idea to cook the fruit in the evening and allow it to drain until the following morning. When ready to make the jelly, put equal parts of juice and granulated sugar in the preserving kettle. Boil rapidly until done. Skim as necessary. (Read instructions on making and testing jelly.) Pour into jelly glasses, cool and cover with paraffin.

Currant Marmalade

Take the currants that were cooked and drained for jelly, press them through a wire sieve. Put equal amounts of this pulp and fresh currants into the preserving kettle and add an equal amount of sugar. Cook to the desired consistency. Put into glasses, cool and cover with melted paraffin.

The quality of this marmalade will not be equal to the marmalade made with all fresh fruit, but it is an excellent way of using the drained currants that would otherwise have to be discarded.

Dewberry Jam

Make over blackberry jam recipe.

Dewberry Jelly

Make over blackberry jelly recipe.

Gooseberry Conserve

Take 4 pounds of gooseberries, 3 pounds of granulated sugar, 1 pound of seeded raisins, the juice and minced rind of 4 or 5 oranges. Put all into the preserving kettle, and cook to the consistency of jam. Put into glasses, cool, and cover with melted paraffin.

Gooseberry Preserves

Put the desired amount of gooseberries in the preserving kettle. Add one-half as much water as berries. Cook very slowly until the berries are tender. They should barely simmer in order to keep them from bursting. Then add as much sugar as there are berries, and boil until it is a light amber color. Do not cook fast or it will scorch. Put into jars or glasses and cover with melted paraffin.

Grape Butter

Put the desired amount of stemmed grapes over the fire in the preserving kettle and add a very little water. Cook until the grapes burst and are tender. Turn them into a sieve and press through. Reject the seeds and the skins. Return the pulp to the preserving kettle, and add to it ¾ as much sugar as there is pulp. Boil to the desired consistency. The butter must be stirred very frequently, or constantly, after the sugar is added to prevent burning. When it is ready to remove

from the fire, add for each quart of the butter ½ even teaspoonful of each of the following ground spices: cloves, cinnamon and allspice. Put into sterile jars and seal.

Grape Conserve

Wash, stem and remove skins from 1 gallon of ripe grapes. Put the skins into a sauce pan, add a little water and place over a very low flame to simmer. Put the grapes into a preserving kettle and cook until tender. Press them through a puree sieve and reject the seeds. Put the pulp, the grape skins and minced rind of 2 or 3 oranges into the preserving kettle. Add ¾ as much sugar as there is of this mixture. Boil to the consistency of jam. Stir frequently to prevent burning. Put into sterile jars and seal. A cupful of chopped English walnut meats to the quart of conserve added 10 minutes before it is done, will improve the flavor.

Grape Jelly

Grapes that are just beginning to ripen are best for jelly.

Put a gallon of stemmed grapes into the preserving kettle, add 1 cupful of water, and put over a slow fire. Cook until the grapes burst and are tender. Turn them into a muslin jelly bag to drain. Put into the preserving kettle equal parts of the juice and granulated sugar. Boil rapidly until done. (Read directions

for making and testing jellies.) Pour into jelly glasses, cool and cover with melted paraffin.

Grapefruit Marmalade

Wash the grapefruit thoroughly. Put all the pulp and ¼ the rind through the food chopper, or chop it fine with a chopping knife. Add water to barely cover and allow to stand over night. In the morning cook in a porcelain-lined kettle for 40 minutes. Then allow to stand until the following morning and boil 20 minutes. Allow to stand again until the following morning and then boil until the white part is tender. Measure the contents of the kettle and add an equal amount of sugar. Boil until the mixture is as thick as jam. Put into glasses, cool and then cover with melted paraffin.

Guava Butter

There are many different varieties of Guavas. The large sweet kind is the best for butter. Use well ripened fruit. Slice the guavas and put them in the preserving kettle with ¼ cupful of water for every quart of guavas. Cook slowly until tender. Then press through a sieve. Add the juice of 1 lemon for each pint of pulp and ¾ as much sugar as there is pulp. Boil until as thick as desiderd. Put into sterile jars and seal.

Kumquat Jam

Slice the kumquats. Put them into the preserving kettle with a little water and cook until tender. Press through a puree or wire sieve. Return to the preserving kettle and add an equal quantity of sugar and the juice of one lemon for every quart of the mixture. Cook until of the desired consistency. Put into sterile jars and seal.

Loganberry Jam

Wash the berries carefully and put the desired amount of fruit into the preserving kettle. Add a little water and cook until the berries are tender. Put through the puree sieve. Return the pulp to the preserving kettle and add an equal quantity of sugar. Boil to the desired consistency. Put into glasses, cool, then cover with melted paraffin.

Loganberry Jelly

Put the berries into the preserving kettle, add a very small quantity of water and cook slowly until the berries are tender. Turn into a jelly bag to drain. It is well to cook the berries in the evening and allow them to drain over night. Put equal parts of the juice and sugar into the preserving kettle and boil rapidly until of proper consistency. (See instructions for making and testing jellies.) Pour into jelly glasses, cool, then cover with paraffin.

Orange Marmalade

Select sour oranges. When peeling the oranges allow some of the white portion of the peel to remain on the orange. Slice the oranges very thin. Cut into very thin strips or mince the yellow portion of the peel of ⅛ of the oranges used and put with the sliced oranges into the preserving kettle. Add an equal quantity of sugar and boil until the liquid portion begins to jell when cooled in a saucer. Put into glasses, cool, then cover with melted paraffin.

Orange and Grapefruit Marmalade

Prepare the grapefruit as for Grapefruit Marmalade. On the third morning when the sugar is to be added, peel and slice oranges sufficient to equal the amount of grapefruit pulp. Mince and add ⅛ of the orange rinds. Measure the grapefruit and orange mixture, and add an equal amount of sugar. Boil until the liquid portion will jell when cooled on a plate. Care should be taken not to overcook. Put into glasses, cool, then cover with melted paraffin.

Peach Butter

Select well ripened peaches. Wash, cut in halves and remove pits. Put them through the puree sieve. Then put the pulp into the preserving kettle, and for each quart of pulp add 1 pint of sugar. Cook until it is

medium thick. The butter must be stirred constantly. Flavor with cinnamon and allspice if desired. Put into sterile jars and seal immediately.

Peach Preserves

Peel and pit the peaches. Drop the sections into cold water. Make a sirup of 3 parts sugar to 2 parts water boiled until it spins a thread or forms a soft ball when dropped into cold water. Take the peaches from the water and drain. Then put them into the sirup and simmer until the peaches are tender. Put into sterile jars and seal immediately.

Pineapple Preserves

Peel and cut into small cubes well ripened pineapples. For every pint of the pineapple add ¾ pint of sugar. Allow to stand one hour or longer. Then put over a slow fire and boil until the pineapple is quite tender. Put into sterile jars and seal immediately.

Plum Butter

Use one of the sweet varieties. Pit the plums. Put them into the preserving kettle with a little water and cook until tender. Press through the puree or wire sieve. Return to the preserving kettle. Add ¾ as much sugar as there is plum pulp. Boil to desired consistency. The butter must be stirred constantly or it

will burn. Flavor with ground cinnamon, cloves and allspice if desired.

Plum Jelly

Wash the plums. Put them into the preserving kettle, and nearly cover with water. Cook until the plums are tender. Turn into a jelly bag and drain off the juice. Put equal parts of the juice and sugar into the preserving kettle. Boil rapidly until done. (Read instructions on making and testing jellies.) Pour into glasses, cool, and cover with melted paraffin.

Plum Preserves

Wash, cut the plums in halves and pit them. Make a sirup of 3 parts sugar and 2 parts water boiled until it spins a thread or forms a soft ball when dropped into cold water. Add the plums to the sirup and boil until they are transparent and the sirup is heavy. Put into jars and seal.

Quince Honey

Pare the quinces and grate them or run them through a food chopper, using a fine knife. Grating them makes a better quality product, but takes more time. Put the grated quinces into the preserving kettle. Press down tight, then add enough water to barely cover. Add sugar equal to the amount of grated quinces. Cook slowly until of the consistency of jam. Put into jars and seal tight.

Quince Jelly

When canning or preserving quinces save the peels and all the knotty sections. Put them into a kettle, press down tight and add enough water to barely cover. (If whole quinces are used, quarter and core, but do not peel.) Cook until tender. Then turn into a jelly bag and drain. Put equal parts of the juice and sugar into the preserving kettle and boil rapidly until done. (Read instructions on making and testing jellies.) Put into glasses, cool, then cover with melted paraffin.

Raspberry Jam

Use either black or red raspberries. Put equal parts of berries and sugar into the preserving kettle. Add a little water and bring to the boiling point over a slow fire. Boil until the liquid portion will jell. (See, Testing Jellies.) Put into glasses, allow to cool, then cover with paraffin.

Raspberry Jelly

Put the raspberries in an earthen jar and crush with a potato masher. Then turn into a jelly bag and allow to drain over night. Put equal portions of the juice and sugar into the preserving kettle and boil until done. (See, Testing Jellies.) Put into glasses, allow to cool, then cover with melted paraffin.

Strawberry Conserve

Small berries may be used, but they must be free from decay and must be washed carefully. Crush the berries, then put them into the preserving kettle and add ¾ as much sugar as berries. Boil slowly for fifteen or twenty minutes. Put into sterile jars and seal. It will improve the conserve to add 1 cupful of broken English walnut meats for each pint.

Strawberry Preserves

Wash and stem the berries. Put equal parts of berries and sugar into the preserving kettle. Allow to stand 30 minutes. Put over a very slow fire and bring to the boiling point. Cook until the sirup is about as thick as honey. It can be tested by putting a little into a saucer and quickly cooling. Put into sterile jars and seal.

PACKING EGGS

During the past score of years various methods of preserving eggs for winter consumption, during the summer months when prices are low, have been used with more or less success. Many of the methods have been tried and re-tried, and then rejected. At present only three or four methods of preserving eggs are recommended by the Government and by poultry journals. For commercial purposes the cold storage method is almost solely employed, and the system has been perfected to the point that cold storage eggs are no longer held in bad repute by the wary customer. It was not without reason that until only a few years ago the cold storage egg did not occupy a very respectable position. The unscrupulous dealer and the imperfect system of cold storage were at fault. In the first place many eggs of doubtful quality came out of cold storage, and in the second place, the unscrupulous dealer before restricted by law, without restraint, distributed these eggs to the retail trade as fresh eggs. This practice became so flagrant that finally legislation requiring that all cold storage eggs be sold as such, was enacted.

The cost of equipment necessary for holding eggs in cold storage places that method beyond the reach of the housewife who is storing eggs for home consumption; hence she must employ a simpler though less desirable

method. The water-glass solution and the lime and salt solution can be recommended as two of the best methods for home use. Eggs preserved by these methods, under proper conditions, will keep in fairly good condition for a period of eight months. At the end of that time they will be perfectly good, although it cannot be said that they will be equal to fresh eggs in flavor.

When packing eggs in water-glass solution or in a lime and salt solution, several things must be taken into consideration. Eggs must be strictly fresh. April, May and June eggs are preferable to late summer eggs. If possible they should be packed within twenty-four hours after being laid. Eggs should be infertile; fertile eggs are not so desirable for packing purposes. Eggs must be clean, but they must not be washed before packing. Washing the eggs removes the gelatinous coating on the shell which is essential to the preservation of the eggs. Pack the clean eggs and use or market the soiled ones after cleaning.

The jars in which the eggs are to be packed must be absolutely clean and free from odor. Glazed earthen vessels or glass receptacles are the best. Fifteen dozen eggs may be packed in an eight gallon jar. Keep the jars in a cool, dry room. The cellar is a good place, provided it is dry, cool and free from odors. The solution must be at least one inch above the last layer of eggs,

and jars should not be disturbed by moving them after beginning to pack the eggs.

Lime and Salt Solution

Slake 4 pounds of quick lime in a small quantity of water; then mix with 4 gallons of fresh water. Add 2 pounds of salt and stir the mixture well. Allow to settle, then pour off the clear liquid, which is the solution in which the eggs are to be packed. As the eggs are put into the jar from day to day, see that enough of this solution is added to keep it at least one inch above the eggs.

Eggs packed in this way will keep if the foregoing rules are observed; and unless they are, the eggs and time spent in packing them will be lost.

Water-Glass Solution

Water-glass solution can be purchased at almost any drug store.

Mix 1½ quarts of the commercial solution with 18 quarts of water. Water which has been boiled, distilled or filtered should be used. Stir until well mixed. As the eggs are packed keep the solution well above them.

If it is possible to purchase the water-glass that comes in powdered form do so, and follow the directions for mixing that are printed on the package. This will insure a more uniform strength.

Taking Eggs from the Solution

Never allow the eggs to remain in the preservative more than one year, and do not use the preservative more than one year.

When eggs are taken from the lime and salt, or the water-glass solution, they should be rinsed immediately.

Upon breaking eggs preserved in this way, it will be found that the albumen is somewhat watery and will nearly always have a slight pinkish tinge. The yolk will be somewhat darker in color, and the vitelline membrane surrounding it will be easily broken.

The flavor will be somewhat inferior to strictly fresh eggs, but they can be recommended for all cooking purposes.

The pores of the shell are sealed by the water-glass solution, so it is necessary to make a small pinhole in the large end of the shell when they are to be boiled to prevent them from breaking.

HOW TO LIVE ON THIRTY CENTS PER DAY

During the months of March and April of the present year the author attempted to reduce the cost of foods for her family to an average of thirty cents per day, per individual. The experiment was started through the request of a number of newspapers and was carried on for a period of sixty days.

The following menus covering a period of two weeks furnish a complete report of the foods served, the cost of each item of food and the total of each meal for fourteen of the sixty days. The meals during the entire period were similar to the menus here given.

All provisions were purchased from the local grocers at the regular retail prices.

It will be noted that all foods that might be classed as luxuries or nick-nacks were eliminated from the diet. Only foods that might be termed essentials, and were necessary for balanced meals were used. It was necessary to forego the better cuts of meat entirely. The high priced canned fruits were used sparingly. Jellies, jams, preserves, pickles and relished were entirely eliminated. Tapioca and rice puddings were used frequently for desserts. The meals served, as the menus will indicate, were simple and easily prepared.

While such meals do not meet with the approval of the fastidious American appetite, they are nevertheless

better suited to meet the requirments of health than the meals served in the average American home. Such meals furnish ample nourishment for the average individual and would in many cases of overworked digestive organs prove to be of therapeutic value.

Most people eat more than is necessary to supply the requirements of the body. Appetite, not the demand for nourishment, dictates. Good meals of simple, wholesome foods, sufficient in quantity to meet the requirements of nutrition are best. They reduce grocery bills, and doctor and undertaker bills.

During this period of exorbitant prices every poor family should so adjust their diet, if possible, that the family income would cover the running living expenses.

MENUS FOR FOUR ADULTS

Averaging less than 30c per Person, per Day.

It is the food we digest, not necessarily what we eat, that nourishes the body.

SUNDAY

Breakfast

	Cents
Steeped Prunes	8.
Creamed Eggs	18.5
Buttered Toast	4.66
Coffee	4.
Total	35.16

Food served—20 prunes; creamed eggs; 4 slices toast; 2 oz. butterine; 4 cups coffee served with cream and sugar.

Creamed Eggs

4 eggs beaten light, add to them one cup milk, season with salt and pepper. Put 1 tablespoon of bacon drippings in the frying pan, turn in the egg mixture and cook over slow fire to desired consistency. Stir constantly to prevent burning. 4 eggs prepared in this way makes 4 liberal servings.

Dinner

	Cents
Tomato Bouillon	6.
Salted Wafers	2.
Roast Beef	22.
Baked Potatoes	4.
Beet Salad	5.33
Bread and Butter	9.
Fruit Triffle	8.
Total	56.33

Food served—1½ pts. bouillon; 2 oz. (8 large) salted wafers; 1/3 of 3 lbs. roast of beef; 4 large baked potatoes; 4 medium sized canned beets, minced and dressed with 1 teaspoon of sugar, 1 tablespoon each of vinegar and salad oil; 6 slices of bread; 2 oz. of oleomargarine; fruit triffle consists of 1 pt. Knox lemon gelatin to which add 1 cubed raw apple, 1 banana cut in cubes, sweeten to taste.

Supper

	Cents
Indian Porridge	4.66
1 qt. Milk	10.
Canned Pears	10.
Total	24.66

Food served—2 pts. Indian porridge; 1 qt. milk; 8 halves of canned pears.

Indian Porridge

When eaten with milk or butter, Indian porridge is sufficient in itself for an evening meal. To heat the dry meal in the oven before making the porridge imparts a most delicious flavor. A large portion of meal can be treated in this way at one time when the oven is being used for some other purpose and then used at intervals when needed. The dry meal should be heated only until a few granules are delicately changed in color. Use 1 cup meal to 3 cups boiling water.

MONDAY

Breakfast

	Cents
Pettijohn	3.
Cream	5.
Stewed Raisins	5.
Bacon	8.12
Bread and Butter	6.
Coffee	4.
Total	31.12

Food served—4 large servings of pettijohn and stewed raisins; ½ pt. top milk; 8 thin slices of bacon; 4 medium slices of bread; 2 oz. butterine; 4 cups coffee served with top milk and sugar. Note—A breakfast food consisting of the entire wheat berry served with raisins is one of the best foods that can be eaten to overcome the necessity of taking laxative medicines.

Luncheon

	Cents
Beef Broth with Rice	2.5
Salted Wafers	2.
Carrots and Peas	13.
Riced Potatoes	4.
Bread and Butter	6.
Apple Tapioca	4.35
Total	31.85

Food served—½ cup rice cooked in 4 cups beef broth; 8 large salted wafers; 1 lb. carrots and ½ can peas (including liquid) creamed with ½ cup milk and 1 even

tablespoon flour; ¾ lb. potatoes; 4 slices bread; 2 oz. oleomargarine; 1 pt. apple tapioca pudding.

Note—The total cost of meat purchased is included in the meat dish served, hence we do not attach a cost to meat broth in the menus. The broth consists of the liquid left in the roaster from Sunday's roast with water added.

Dinner

	Cents
Cold Roast Beef	22.
Turnips baked in milk	8.
Baked Cabbage	7.
Bread and Butter	9.
Apple Pie	7.25
Total	53.25

Food served—1/3 of the beef roasted Sunday; 1 lb. turnips cooked in 1 cup of milk; 1 lb. cabbage cooked with 2 slices bacon; 6 slices bread; 2 oz. butterine; 4 liberal servings of apple pie.

Note—Apple pie was made by putting 1 lb. apples in deep baking dish with 1/3 cup sugar and covered with a thin layer of rich biscuit dough; much more wholesome and easier made than the ordinary apple pie. For the cover, use ½ cup flour, ¼ teaspoon baking powder, 2 even teaspoons bacon drippings and 2 tablespoons milk.

TUESDAY

Breakfast

	Cents
Baked Apples	5.12
Buckwheat Waffles	9.25
Syrup	4.
Bacon	8.
Coffee	4.
Total	30.37

Food served—4 medium-sized baked apples; 4 large waffles; ½ pt. sirup; 8 thin slices bacon; 4 cups coffee served with cream and sugar.

Buckwheat Waffles

2 cups sour milk; 1 cup buckwheat flour; ½ cup white flour; ½ teaspoon soda; 1 rounding teaspoon baking powder; ½ teaspoon salt. Add baking powder, soda and salt to flour, sift through, then add the milk to the flour and stir to a smooth batter. There is no other waffle that approaches the buckwheat waffle in flavor. This amount of batter will make 4 large waffles.

Luncheon

	Cents
Green Split Pea Soup	3.33
Crackers	2.
Boiled Rice	5.
American Cream Cheese	10.
Bread and Butter	8.
Pineapple Sliced	9.
Total	37.33

Food served—4 cups pea soup; 2 oz. (12) crackers; 1½ pts. boiled rice; 5 oz. cheese; 5 slices bread; 2 oz. butterine; 4 slices canned pineapple.

Dinner

	Cents
Imitation Meat Loaf	10.25
Creamed Parsnips	7.
Cold Slaw	5.25
Bread and Butter	9.
Apple Tapioca Pudding	4.5
Total	36.00

Food served—4 large servings of imitation meat loaf; 1 lb. creamed parsnips; ¾ lb. cold slaw; 6 slices bread; 2 oz. butterine; 1½ pts. apple tapioca pudding.

Imitation Loaf

Soak 1½ cups green split peas in 2 qts. of water over night; the following day cook them for about 2 hours or until tender, then turn the peas into the puree sieve and drain thoroughly. The liquid drained off makes a delicious soup. Serve for luncheon. Press the drained peas through the sieve—there will be about 2½ cups of the pea pulp. Add to it 1 cup dry bread crumbs and 1 egg, season with salt, pepper and a little onion. Mix and form into loaf. Bake 30 minutes.

Note—In food value this amount of imitation meat loaf is equivalent to about 1½ lbs. of beef.

WEDNESDAY

Breakfast

	Cents
Oranges	6.66
Creamed Chipped Beef	12.66
Toast	5.
Fried Mush	5.
Butter	4.
Coffee	4.
Total	37.32

Food served—4 halves of oranges; 10c worth of dried beef creamed with 1 cup of milk and 1 tablespoon flour; 6 slices toast; mush made from 1 cup corn meal cooked in 3 cups boiling water; 2 oz. butterine; 4 cups coffee served with cream and sugar.

Luncheon

	Cents
Macaroni with Veal	13.1
Smothered Potatoes	5.
Bread and Butter	8.
Stewed Apples	5.
Total	31.1

Food served—4 large servings of macaroni and veal; 1 lb. potatoes; 6 slices bread; 2 oz. butterine; 1 lb. apples; 1/3 cup sugar.

Macaroni with Veal

Cook 10c worth of veal in 3 cups water for 30 minutes. Veal should be cut in cubes before putting it on to cook.

Add to the kettle 1 cup (3 oz.) of broken macaroni and cook for a few minutes over the fire, then put it in oven and bake until macaroni is tender. Season with salt when adding macaroni, and add more water if necessary.

Dinner

	Cents
Cold Roast Beef	22.
Breaded Tomatoes	7.
Steamed Rice	5.5
Bread and Butter	8.
Sliced Bananas	8.
Cream	2.5
Total	53.0

Food served—1/3 roast of beef roasted Sunday; 1 cup canned tomatoes diluted with ½ cup water heated and then poured over 3 dry slices of bread cut in cubes. Season with a little salt and sugar; ½ cup rice steamed in 1½ cups water; 6 slices bread; 2 oz. butterine, 1 cup of the top of a quart bottle of milk.

THURSDAY

Breakfast

	Cents
Pitted Prunes	8.
Bacon	8.
Graham Muffins	4.
Cocoa	12.
Bread and Butter	7.
Total	39.

Food served—20 prunes; 4 large graham muffins; 8 thin slices of bacon; 4 cups of cocoa; 4 slices of bread; 2 oz. butter.

Graham Muffins

2 cups graham flour, 1 heaping teaspoon baking powder; 1 even teaspoon salt, 2 tablespoons lard or bacon drippings, 1 cup sweet milk. Sift baking powder and salt through flour, add the milk and shortening and mix until the batter is smooth. This amount of batter makes 6 medium-sized or four large muffins.

Note—Do not sift the bran out of the graham flour. It is a laxative medicine.

Luncheon

	Cents
Cream of Lima Bean Soup.....	5.
Baked Potatoes	6.
Spinach	8.5
Bread and Butter	8.
Rice with Raisins	10.12
Total	37.62

Food served—4 cups soup; 1¼ lbs. baked potatoes; ½ can spinach; 6 slices of bread; 2 oz. butterine; 4 liberal servings of rice and raisins.

Rice with Raisins

Cook ¾ cup of rice in 1 cup milk and 1½ cups of water in the double boiler; when the rice is about half

done, add 1/3 lb. of seeded raisins and a very little sugar, and continue the cooking until the rice is tender.

Dinner

	Cents
Lima Bean Loaf	11.25
Creamed Corn	10.5
Combination Salad	5.
Bread and Butter	8.
Raisin Pie	7.5
Total	42.25

Food served—4 liberal servings of the lima bean loaf; 1½ cups canned corn with ½ cup of milk; 4 liberal servings of salad; 6 slices of bread; 2 oz. butterine; 4 servings of raisin pie.

Note—The salad consisted of equal parts of beet, apple and cabbage minced and seasoned with sugar and vinegar. The raisin pie was made with only an upper crust.

FRIDAY

Breakfast

	Cents
Sliced Bananas	6.25
Oat Meal	2.
Top Milk	5.
Toast and Butter	9.
Coffee	4.
Sugar	1.
Total	27.25

Food served—3 bananas sliced; ½ cup of oat meal

cooked in 1¼ cups of water; 1/3 cup of sugar; 1 pt. top milk; 8 thin slices of toast; 2 oz. butterine; 4 cups of coffee with cream and sugar.

Luncheon

	Cents
Vegetable Stew	10.
Banana Salad	6.25
Cottage Cheese & Jelly Sandwiches	10.5
Sliced Oranges and Cocoanut	9.
Total	35.75

Food served—Vegetable stew consisted of ½ lb. potatoes; ¼ cup of cabbage; ½ lb. turnips sliced, seasoned and cooked with 2 tablespoons of bacon drippings; ½ banana garnished with boiled dressing served to each person; sandwiches; 2 oranges sliced, sweetened and garnished with shredded cocoanut.

Note—For sandwiches, cut 9 slices of bread as thin as possible; spread jelly on one slice, lay on second slice and spread cottage cheese over, then a third slice on top. Cut the sandwiches in quarters.

Dinner

	Cents
Salmon en Casserole	20.
Baked Rice	4.
Vegetable Salad	6.4
Bread and Butter	6.
Fruit Gelatine	10.12
Total	46.52

Food served—1 can salmon baked in casserole with 2 strips of bacon; ½ cup rice cooked in 1½ cups of water, season with salt; 4 slices of bread; 2 oz. butterine; 4 liberal servings of fruit gelatine.

Note—For fruit gelatine, prepare 1 pt. of Knox gelatine, and add to it 1 apple cut in cubes and 1 banana sliced and sweetened to taste.

SATURDAY

Breakfast

	Cents
Farina	2.
Top Milk	5.
Jelly Omelet	13.5
Rolls and Butterine	9.
Coffee	4.
Total	33.5

Food served—½ cup Farina cooked in 1½ cups boiling water; 1 pt. top milk; 6 rolls; 2 oz. butterine; 4 cups coffee.

Note—Make omelet with 3 eggs and spread with jelly.

Luncheon

	Cents
Cream of Spinach Soup	13.
Rice and Cheese	12.
Bread and Butterine	8.
Stewed Apples	5.
Total	38.

Food served—¾ can spinach; 3 cups milk; ½ cup rice; ½ cup grated cheese; 1 pt. milk; 1 lb. apples; 1/3 cup sugar; 6 slices bread! 2 oz. butterine.

Note—Heat milk to the boiling point, add the spinach, which should be minced, bring to boiling point again; season with salt and serve.

Rice and Cheese

Cook ½ cup rice in 1½ cups boiling water until tender—about 35 minutes—in double boiler, add ½ teaspoon salt, 1 pt. milk and ½ cup grated cheese. Fold the cheese through until it becomes creamy.

Dinner

	Cents
Irish Stew	20.4
Creamed Carrots	6.
Beet Salad	6.
Bread and Butterine	8.
Canned Pineapple	8.
Total	48.4

Food served—½ lb. round steak; ¾ lb. potatoes; 3 oz. onions; 1 lb. carrots creamed in ½ cup milk, 1 teaspoon flour; 1½ cups diced canned beets dressed with ½ cup boiled salad dressing; 6 slices bread; 2 oz. butterine; ½ of a small can of pineapple.

Note—For Irish stew, cut the steak in cubes, cook for 30 minutes, then add the potatoes and onions sliced, season and cook until done.

SUNDAY

Breakfast

	Cents
Oranges	6.75
Buckwheat Waffles	9.25
Sirup	4.
Butterine	4.
Coffee	4.
Total	28.00

Food served—2 oranges; 4 large waffles; 1 cup sirup; 2 oz. butterine; 4 cups coffee served with cream and sugar.

Sirup

To 1 lb. granulated sugar, add 1 cup of water and boil until the sirup has changed slightly in color, then remove immediately from the fire or it will burn. Add to it slowly 1 cup boiling water, as it will cause a great deal of sputtering. When the water is all added begin to stir and keep stirring until the sirup and water are evenly blended. This makes a sirup with a very pleasing flavor and it will not granulate.

Dinner

	Cents
Smothered Steak	25.
Mashed Potatoes	7.
Slaw in Cabbage Shells	6.25
Bread and Butter	8.
Pineapple Tapioca	7.25
Total	53.50

Food served—1 lb. round steak smothered in casserole; 1 lb. potatoes mashed, to which add ½ cup milk; ½ lb. of shredded cabbage served in crisp, tender cabbage leaves; 6 slices of bread; 2 oz. oleomargarine; 4 servings pineapple tapioca.

Supper

	Cents
Cornmeal Mush	2.5
Milk	10.
Sliced Canned Peaches	12.5
Sugar Cookies	6.
Total	31.

Food served—1 cup of cornmeal cooked in 3 cups salted water; 1 qt. milk; ½ can sliced peaches; 6 sugar cookies.

Note—To cook cornmeal mush in the double boiler avoids having a hard pan to wash and prevents the loss of the mush that ordinarily clings to the utensil when cooked directly over the fire. Cornmeal mush is an excellent dish for any evening meal. The very cheapness of this dish is largely responsible for our lack of esteem of it.

MONDAY

Breakfast

	Cents
Steeped Prunes	8.
Shirred Eggs	12.
Fruit Muffins	6.
Oleomargarine	4.
Coffee	4.
Total	34.

Food served—20 prunes; 4 shirred eggs; 5 fruit muffins; 2 oz. oleomargarine; 4 cups of coffee served with cream and sugar.

Note—The fruit muffins were graham muffins with raisins added to the batter. Muffins of this character are a splendid laxative food.

Luncheon

	Cents
Cream of Tomato Soup	11.25
Wafers	2.
Cottage Cheese Balls	5.
Graham Muffins	5.
Oleomargarine	4.
Tea	4.
Total	31.25

Food served—2 pts. cream tomato soup; 8 wafers; 5c worth of cottage cheese; 5 graham muffins; 2 oz. oleomargarine; 4 cups tea served with sugar and cream.

Note—For cream of tomato soup, take 1 pt. of canned tomatoes, ½ cup of water and 1 pt. milk.

Note—Cottage cheese is one of the best protein foods obtainable and furthermore, very wholesome if made of good milk.

Dinner

	Cents
Scotch Broth	4.
Boiled Beef	25.
Boiled Potatoes	4.
Emergency Salad	7.25
Peach Tapioca	9.5
Bread and Butterine	8.
Total	57.75

Food served—2 pts. Scotch broth; 25c worth of soup meat; 1 lb. boiled potatoes; 4 servings of peach tapioca.

Note—One hour before serving dinner, add ½ cup of barley to the meat kettle and the potatoes 30 minutes later. When done remove the potatoes and meat to the warming oven and serve the soup. This method saves time, fuel and extra kettles to wash.

TUESDAY

Breakfast

	Cents
Baked Northern Spies	6.
Farina	3.
Top Milk	5.
Cream Omelet	13.25
Coffee	4.
Total	31.25

Food served—4 medium-sized baked Northern Spy apples; ¾ cup of farina cooked in double boiler in 2½ cups water; 1 pt. top milk; 4 eggs made into cream omelet; 4 cups coffee served with cream and sugar.

Luncheon

	Cents
Potato Soup	6.5
Rice with Cheese	13.25
Carrot Salad	5.
Bread and Butterine	8.
Peach Pudding	9.5
Total	42.25

Food served—½ lb. potatoes, with the meat left from yesterday minced and added and enough water to make 1 qt. of soup when ready to serve; 4 servings of rice with cheese; ½ lb. carrots cooked and when cooled, mince and serve with boiled dressing; 6 slices bread; 2 oz. butterine; 4 servings peach pudding.

Rice with Cheese

Cook in steam-cooker or double boiler ½ cup rice in 1½ cups boiling water. The rice should be tender in about 35 minutes and all the water absorbed; then add 1 pint milk and in 10 minutes ¾ cup grated cheese and fold through until it becomes creamy.

Peach Pudding

Put 1/3 can sliced peaches into a deep baking dish.

Make a biscuit dough using 1 cup flour, divide into four portions and place on the peaches. Place in the oven and bake until brown.

Dinner

	Cents
Boiled Vegetable Dinner	27.5
Bread and Butter	8.
Baked Rice with Raisins	8.25
Total	43.75

Food served—1 can peas, ½ lb. potatoes, ½ lb. carrots, ¼ lb. cabbage, 3 onions; 6 slices bread; 2 oz. butterine; 4 servings baked rice with raisins.

Note—Cook the potatoes, carrots, cabbage and onion in a tight covered vessel until tender. About 15 minutes before serving, turn in the peas including the liquid. To serve, remove the potatoes, carrots, cabbage and onions to vegetable dishes and place in a warm oven. Serve the vegetable stock with the peas for soup.

WEDNESDAY

Breakfast

	Cents
Steeped Evaporated Apricots	9.
Shirred Eggs with Bacon	16.
Graham Muffins	4.
Oleomargarine	4.
Coffee	4.
Total	37.

Food served—4 servings steeped apricots; 4 eggs shirred and served with 4 slices bacon; 4 graham muffins; 2 oz. oleomargarine; 4 cups coffee served with sugar and cream.

Shirred Eggs

Put some bacon drippings in heated shallow casserole, break the eggs in and bake in oven until cooked to desired stage. The eggs, muffins and bacon should be cooked in the oven at the same time.

Luncheon

	Cents
Macaroni with Fresh Pork	15.5
Potatoes in the Half Shell.....	4.
Bread and Butterine	8.
Cornstarch Custard	9.5
Total	37.

Food served—1/3 lb. macaroni cooked with 10c worth of fresh pork; 1 lb. potatoes; 6 slices bread; 2 oz. butterine; 4 servings cornstarch custard.

Note—Bake the potatoes and when done cut them in halves lengthwise, and mash them with a fork until they are mealy, then press them with the fingers to give them a rounded appearance—add a dash of paprika to each.

Macaroni and Pork

Cook the pork in three cups water until tender, then remove from the vessel and put the macaroni in. While

macaroni is cooking put the pork through the food chopper. When the macaroni is done stir the pork through, season and put into a baking dish. Pour over a gravy made by browning 1 tablespoon flour in 1 tablespoon drippings and adding 1 cup water. Sprinkle bread crumbs on top and bake in oven until browned.

Dinner

	Cents
European War Stew	24.
Cottage Cheese Balls	5.
Bread and Butter	8.
Apple Pie	7.25
Total	44.25

Food served—4 servings of stew; 6 slices bread; 2 oz. butterine; 5 cents worth cottage cheese; 4 servings apple pie.

European Stew

Boil 10c worth of soup meat until nearly tender, then add 1 lb. potatoes, 1 carrot, 2 onions and 1 lb. turnips cut in small pieces. The vegetables will require about 40 minutes' cooking.

THURSDAY

Breakfast

	Cents
Bananas	8.
Milk Toast	15.
Butterine	4.
Coffee	4.
Total	31.

Food served—4 bananas; 6 slices toast; 1 qt. hot milk; 2 oz. butterine; 4 cups coffee.

Luncheon

	Cents
Lima Bean Soup	8.5
Potatoes au Gratin	6.
Vegetable Salad	7.25
Bread and Butterine	7.
Fruit Cup	9.5
Total	38.25

Food served—2 pts. lima bean soup; 1 lb. potatoes; 4 servings of vegetable salad; 6 slices bread; 2 oz. butterine; 4 servings fruit cup.

Note—The vegetable salad is made of shredded cabbage, minced canned beets with enough minced onion to give it flavor, and dressed with boiled dressing. The fruit cup consists of 1 cubed banana, 1 red apple cubed (do not pare), ½ cup sliced peaches, 1 orange sliced. Sweeten to taste. Chill and serve in sherbet cups.

Potatoes au Gratin

1 lb. potatoes sliced, seasoned and baked in casserole with a little water. When half done, sprinkle bread crumbs over the top and put a few bits of bacon on the crumbs. Bake until the potatoes are tender and the crumbs are browned.

Dinner

	Cents
Vegetable Soup	0.
Pork Chops	22.
Boiled Rice	4.
Dressed Lettuce	8.
Bread and Butter	8.
Apricot Pie	9.5
Total	51.5

Food served—4 servings of vegetable soup; 4 pork chops; 1 cup rice cooked in 2 qts. of water and drained; 1 large head of lettuce shredded and dressed with sugar, salt and vinegar; 4 slices bread; 2 oz. butterine; 4 servings of apricot pie.

Note—The vegetable soup consists of the war stew left from previous day with water added, hence no cost is attached. The pie should be baked in a deep dish with only a top crust.

FRIDAY

Breakfast

	Cents
Sliced Oranges	8.
Cream of Wheat	3.
Top Milk	5.
Graham Muffins and Butter	8.
Sirup	4.
Coffee	4.
Total	32.

Food served—2 oranges peeled and sliced crosswise; ¾ cup cream of wheat cooked in double boiler in 2½ cups water; 1 pt. top milk; 4 graham gems; ½ pt. sirup; 2 oz. oleomargarine; 4 cups coffee served with cream and sugar.

Luncheon

	Cents
Cream of Bean Soup	5.
Buttered Carrots and Peas	14.25
Mashed Potatoes	6.
Minced Lettuce	5.
Bread and Butter	8.
Baked Rice	6.
Total	44.25

Food served—2 pts. cream of bean soup; 1 lb. carrots and ½ can peas; 1 lb. mashed potatoes; 1 head lettuce minced and dressed with sugar, salt and vinegar; 6 slices bread; 2 oz. oleomargarine; 4 servings baked rice.

Note—For carrots and peas, slice the carrots and cook

until tender, then add the peas and season with bacon drippings and salt, continue cooking for 10 minutes after the peas are added.

Dinner

	Cents
Baked Salmon with Bacon.....	20.
Baked Potatoes	4.
Beet and Onion Salad	5.
Bread and Butter	7.
Cream Tapioca	7.25
Total	43.25

Food served—1 can salmon baked in casserole with 4 slices of bacon laid on top; 4 medium-sized beets and 1 small onion minced, and dressed with a little sugar and vinegar; 1 lb. baked potatoes; 5 slices bread; 2 oz. butterine; 4 servings of cream tapioca.

SATURDAY

Breakfast

	Cents
Baked Apples	5.5
Rolled Oats	2.75
Top Milk	5.
Broiled Bacon	8.
Bread and Butter	6.
Coffee	4.
Total	31.25

Food served—4 baked apples; 4 servings rolled oats; 1 pt. top milk; 8 thin slices broiled bacon; 4 slices bread; 2 oz. butterine; 4 cups coffee.

Note—To broil bacon successfully it is necessary that a wire broiling rack especially made for the purpose be purchased. Place the strips of bacon on the rack and set the rack in a shallow drip pan. Put into heated oven and broil for from 3 to 5 minutes. This is the most desirable way bacon can be cooked and one avoids burning the drippings which should be retained to replace lard in cooking.

Luncheon

	Cents
Baked Beans	12.
Ham Sandwiches	11.75
Carrot Salad	5.
Bread and Butter	7.
Pumpkin Pie	7.5
Total	43.25

Food served—1 can baked beans; 8 sandwiches; ½ lb. cooked, minced carrots dressed with boiled salad dressing; 4 slices bread; 2 oz. oleomargarine; 4 servings pumpkin pie.

Note—For ham sandwiches, run 10c worth of boiled ham through the food chopper, blend with a little boiled salad dressing. Spread thin slices of bread with the mixture and make into sandwiches.

Pumpkin Pie

1 cup canned pumpkin, 1 cup milk, 1 even tablespoon cornstarch, sweeten and flavor to suit taste. Bake in one

crust. The use of cornstarch eliminates the necessity of using eggs. This recipe makes a splendid, economical pie.

Dinner

	Cents
Sliced Boiled Ham	15.
Smothered Potatoes	6.
Cabbage Apple Salad	7.25
Bread and Butterine	7.
Riced Baked with Raisins.....	10.25
Total	45.5

Foods served—Boiled ham; 1 lb. potatoes; 4 servings cabbage apple salad; 4 slices bread; 2 oz. butterine; 4 servings rice baked with raisins.

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