

# Frozen

# Foods

- *how to freeze*
- *how to cook*

Issued by  
The Agricultural Extension Service  
The Texas A. & M. College System  
The United States Department of Agriculture  
G. G. Gibson, Director, College Station

## TABLE OF CONTENTS

<p>5 POINTS TO SUCCESS IN FREEZING FOODS ..... 3</p> <p><b>FREEZING VEGETABLES</b></p> <p style="padding-left: 20px;">Selection and Preparation..... 5</p> <p style="padding-left: 20px;">Scalding or Heating..... 6</p> <p style="padding-left: 20px;">Timing ..... 6</p> <p style="padding-left: 20px;">Chilling ..... 7</p> <p style="padding-left: 20px;">Packing ..... 7</p> <p><b>VEGETABLES FOR FREEZING</b></p> <p style="padding-left: 20px;">Asparagus ..... 8</p> <p style="padding-left: 20px;">Beans, Lima ..... 8</p> <p style="padding-left: 20px;">Beans, Snap ..... 8</p> <p style="padding-left: 20px;">Beets ..... 8</p> <p style="padding-left: 20px;">Broccoli ..... 8</p> <p style="padding-left: 20px;">Carrots ..... 9</p> <p style="padding-left: 20px;">Cauliflower ..... 9</p> <p style="padding-left: 20px;">Corn ..... 9</p> <p style="padding-left: 20px;">Eggplant ..... 9</p> <p style="padding-left: 20px;">Okra ..... 10</p> <p style="padding-left: 20px;">Peas, Field ..... 10</p> <p style="padding-left: 20px;">Peas, English ..... 10</p> <p style="padding-left: 20px;">Peppers, Green and Pimiento.. 10</p> <p style="padding-left: 20px;">Pumpkin ..... 11</p> <p style="padding-left: 20px;">Rhubarb ..... 11</p> <p style="padding-left: 20px;">Spinach and Other Greens... 11</p> <p style="padding-left: 20px;">Squash, Winter ..... 11</p> <p style="padding-left: 20px;">Squash, Summer ..... 11</p> <p><b>FREEZING FRUITS</b></p> <p style="padding-left: 20px;">Selection and Preparation... 12</p> <p style="padding-left: 20px;">Packing ..... 13</p> <p><b>FRUITS FOR FREEZING</b></p> <p style="padding-left: 20px;">Apples ..... 14</p> <p style="padding-left: 20px;">Apricots ..... 14</p> <p style="padding-left: 20px;">Blackberries ..... 14</p> <p style="padding-left: 20px;">Dewberries ..... 14</p> <p style="padding-left: 20px;">Cantaloupe ..... 14</p> <p style="padding-left: 20px;">Cherries ..... 15</p> <p style="padding-left: 20px;">Citrus Fruits ..... 15</p> <p style="padding-left: 20px;">Citrus Juices ..... 15</p> <p style="padding-left: 20px;">Cranberries ..... 15</p>	<p style="padding-left: 20px;">Figs ..... 15</p> <p style="padding-left: 20px;">Grapes ..... 15</p> <p style="padding-left: 20px;">Mangoes ..... 16</p> <p style="padding-left: 20px;">Peaches ..... 16</p> <p style="padding-left: 20px;">Persimmons ..... 16</p> <p style="padding-left: 20px;">Pineapple ..... 16</p> <p style="padding-left: 20px;">Plums ..... 16</p> <p style="padding-left: 20px;">Strawberries ..... 17</p> <p style="padding-left: 20px;">Fruit Juices ..... 17</p> <p><b>FREEZING MISCELLANEOUS FOODS</b></p> <p style="padding-left: 20px;">Butter ..... 17</p> <p style="padding-left: 20px;">Cottage Cheese ..... 17</p> <p style="padding-left: 20px;">Cream ..... 17</p> <p style="padding-left: 20px;">Ice Cream ..... 17</p> <p style="padding-left: 20px;">Eggs ..... 18</p> <p style="padding-left: 20px;">Pecans ..... 18</p> <p><b>PREPARING FROZEN FOODS FOR THE TABLE</b></p> <p style="padding-left: 20px;">Using Frozen Vegetables..... 19</p> <p style="padding-left: 20px;">Using Frozen Fruits..... 19</p> <p style="padding-left: 20px;">Thawing Fruits ..... 19</p> <p style="padding-left: 20px;">Using Frozen Meats..... 20</p> <p style="padding-left: 20px;">Thawing Meats ..... 20</p> <p style="padding-left: 20px;">Using Frozen Poultry..... 20</p> <p style="padding-left: 20px;">Freezing Ready-to-Eat Foods.. 20</p> <p style="padding-left: 20px;">Cooked Foods ..... 21</p> <p style="padding-left: 20px;">Roasted and Fried Meats.... 22</p> <p style="padding-left: 20px;">Baked Beans ..... 22</p> <p style="padding-left: 20px;">Seasonings ..... 22</p> <p style="padding-left: 20px;">Left-Overs ..... 22</p> <p style="padding-left: 20px;">Baked Foods ..... 23</p> <p style="padding-left: 40px;">Pies ..... 23</p> <p style="padding-left: 40px;">Cakes ..... 24</p> <p style="padding-left: 40px;">Cookies ..... 25</p> <p style="padding-left: 40px;">Yeast Breads and Rolls.... 26</p> <p style="padding-left: 40px;">Quick Breads ..... 27</p> <p style="padding-left: 40px;">Sandwiches ..... 27</p> <p><b>SUGGESTED PLAN FOR KEEPING RECORDS ..... 28</b></p>
---	--

by

EXTENSION FOODS AND NUTRITION SPECIALISTS

Texas A. & M. College System

# FROZEN FOODS

- *how to freeze*
- *how to cook*

## *... 5 Points to Success in Freezing Foods*

### ● GOOD QUALITY

One should always remember that the food coming out of the locker drawer or the home freezer is no better than it was before it was frozen and stored. For this reason, the fruits and vegetables to be frozen should be the correct variety for freezing and harvested at the right stage of maturity.

### ● CAREFUL PREPARATION

Cleanliness is the first rule. The main precaution is to prevent germs from getting into the food. Freezing does not destroy all germs, but it prevents their growth.

Speed in preparation is very necessary. Promptness in handling, chilling and freezing any product helps retain quality.

Be sure to follow the proper method for the food you are preparing.

### ● PROPER PACKAGING

Use a moisture-vapor-proof container or wrapping. This type of wrapping or container will keep the product from losing its flavor, color, food value and also from changing its texture. Double cellophane bags, heavily waxed cartons, plastic cartons, tin cans, glass freezer jars, aluminum foil and pliofilm are some of the containers and wrappings which may be used for packaging foods for freezing. These packaging materials may be bought from department, grocery, hardware and variety stores as well as locker plants and mail order houses.

### ● LOW TEMPERATURE

Quick freeze foods at  $-20^{\circ}$  F. in still air or  $-5^{\circ}$  F. in moving air. This is a locker plant management problem, but

it is the duty of the patron to see that these temperatures are maintained. Freezing produces changes in composition of food just as any other type of food preservation. The structure of the food is softened and there is some change in the flavor. Quick freezing keeps these changes to a minimum, resulting in better quality food.

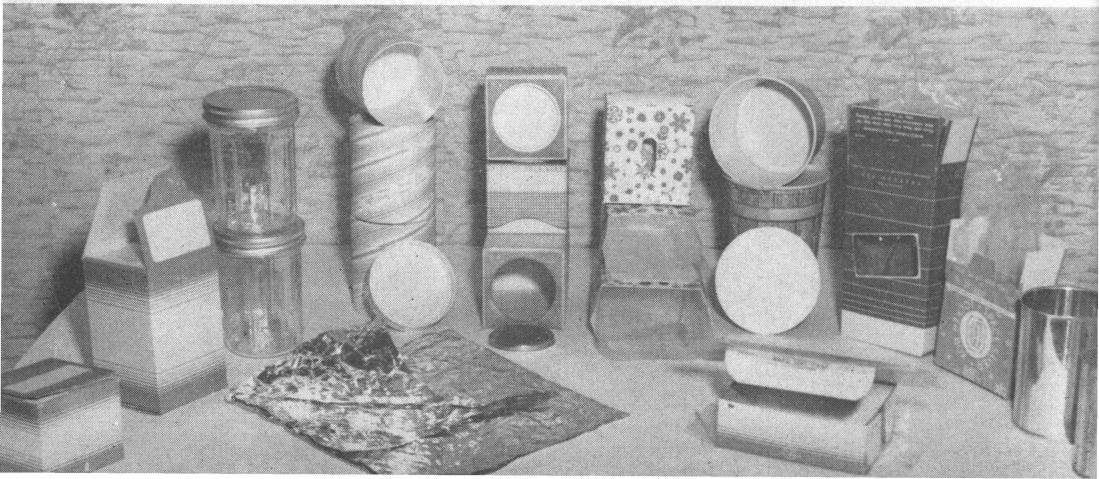
Home freezers are designed primarily for storing foods, but they may be used for quick freezing small quantities of food. The amount frozen at any one time should be small enough so that the temperature of the whole compartment is not raised enough to damage the stored products. Follow the manufacturers' recommendations in the operation of the home freezer. A freezing temperature of 0° F. in the home freezer is adequate for most foods. The load frozen at any one time should be small enough so that all the packages to be frozen can be placed against the bottom or sides of the freezing chamber with space around them for circulation of air.

## ● STORAGE

Storage at 0° F. with variations of not more than 3° to 5° F. is very important. Research has shown that the higher the temperature gets above 0° F., the quicker the food changes in color and flavor and the greater the losses in food value. If the temperature is allowed to go up and down, food dries out more quickly. Frozen food undergoes slow changes in storage and it will not retain its quality indefinitely.

There are several points that will affect the length of

Foods may be frozen and stored in many types of containers and wrappings.



time that frozen products may be expected to keep without loss of quality:

*Whether they have been handled properly before freezing.*

*The packaging material used.*

*The storage temperature.*

*The kind of food stored.*

*Length of storage.*

Do not store frozen food too long. Suggested lengths of storage for different foods are as follows:

Fruits and Vegetables—Not over one year

Meats—Beef, Veal, Lamb and Mutton—one year

Pork—six months

Poultry—six months

Thaw food properly, and use frozen food immediately after thawing. Since all bacteria are not killed by freezing, they become more active as the foods thaw. Spoilage will occur quickly if frozen foods are not used soon after thawing; also more food value is lost.

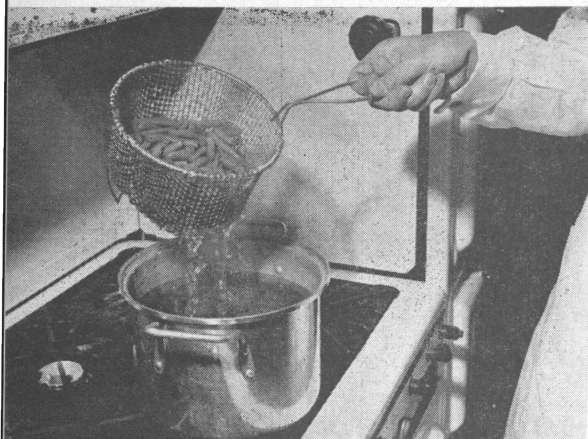
Frozen food that has been thawed and allowed to reach a temperature as high as 50° or 60° F. should never be refrozen. There is danger of food poisoning.

## ... *Freezing Vegetables*

### ● SELECTION AND PREPARATION

Speed in getting vegetables from garden to freezer is very important in having top quality frozen vegetables from your home freezer or locker drawer.

Select fresh, tender products at the right stage for good eating. During hot weather it is wise to harvest vegetables in the early morning before they have absorbed much heat from the sun. Harvest when the products have reached their best flavor and texture. All vegetables should be young and tender when frozen to have a top quality product. Freeze the vegetables without delay, because they lose quality rapidly after harvesting. If it is necessary to store vegetables for a short time after harvesting, spread them out loosely in a cool, well-



ventilated place, or pack loosely in the refrigerator. Prompt cooling in ice cold water of many freshly picked vegetables followed by storage in a refrigerator, will help retain flavor and quality.

The preparation of vegetables for freezing is similar to that required for canning. Wash well, drain, sort, trim and cut the vegetables as for eating or canning.

## ● SCALDING OR HEATING

*Scalding the vegetables in boiling water or steam is necessary to prevent loss of quality and to preserve the vitamin content of the vegetables. The scalding also brightens the color, shrinks the food, further cleans the product, and stops the action of the enzymes.*

### . . . *This is the Way to Scald the Vegetables*

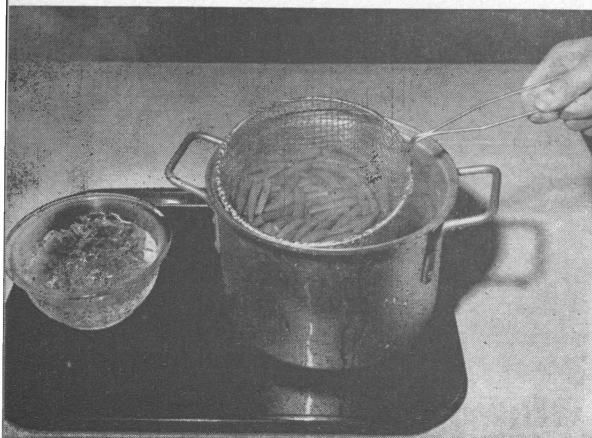
Select a large kettle (enamelware, aluminum or stainless steel). Place a gallon of water in the kettle and bring to a rolling boil.

Place about one pound of prepared vegetables in a wire basket or a large loose cheesecloth bag and dip in the vigorously boiling water.

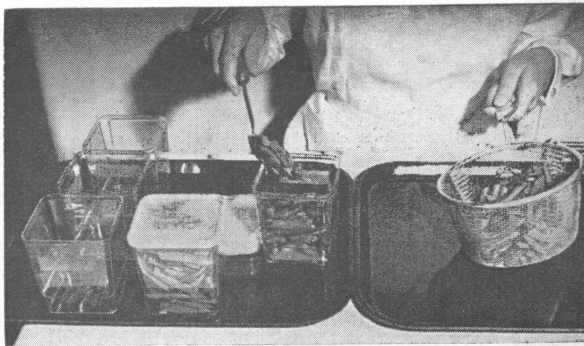
Keep the kettle covered during the entire scalding period. Keep the heat on high so that the water will continue boiling vigorously.

## ● TIMING

*Start counting scalding time as soon as the vegetable*



is put into the boiling water. Each vegetable requires a different scalding time. Follow the scalding time for each vegetable. It is important to heat the food the right length of time. Too long a scalding period will result in softening of texture and in unnecessary loss of water soluble vitamins and minerals in the water. If vegetables are not scalded long enough, they will lose color and flavor and become tough during storage.



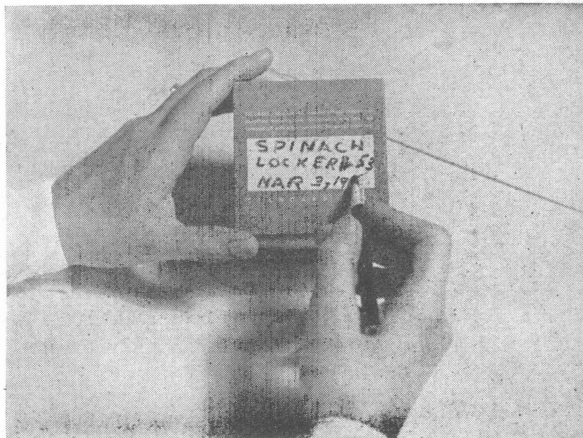
## ● CHILLING

Place the scalded vegetables immediately in running cold water or a large container of iced water. The chilling stops any further cooking and also prevents loss of quality. The chilling should be only long enough to cool the vegetables. About 2 or 3 minutes will usually be required to cool the vegetables in iced water. Be sure the vegetables are cool before packing them. Test coolness of the vegetables by biting into several pieces. If the product is cool to the tongue, it is cool enough to pack.

## ● PACKING

After the vegetables have been scalded, chilled and drained, pack in airtight, moisture - vapor - proof containers. Seal according to type container being used.

Label containers with name of vegetable, locker number and date.



# ... Vegetables for Freezing

## ASPARAGUS

### Varieties

Martha Washington, Mary Washington and Palmetto.

### Preparation

Discard woody and blemished stalks. Wash in running cold water. Sort according to size. Trim stalks by removing scales with a sharp knife. Cut into even lengths, 4 to 6 inches.

### Scalding

Small—2 minutes  
Medium—3 minutes  
Large—4 minutes  
Chill in iced water. Drain. Package and freeze immediately.

## BEANS — LIMA

### Varieties

Fordhook Bush, Henderson Bush, Burpee's Improved and Florida Speckled.

### Preparation

Select only young tender beans. Shell, wash and sort according to size.

### Scalding

Small—2 minutes  
Medium—3 minutes  
Large—4 minutes  
Chill in iced water and drain. Package and freeze immediately.

## BEANS — SNAP

### Varieties

Tendergreen, Blue Lake, Logan, and Kentucky Wonder.

### Preparation

Use only fresh young beans. Wash in running cold water. Cut or snap off tips and sort for size. Freeze small beans whole if desired. Cut or break larger beans into suitable lengths.

### Scalding

Small—2 minutes  
Medium—3 minutes  
Large—4 minutes  
Chill in iced water and drain. Package and freeze immediately.

## BEETS

### Varieties

Detroit Dark Red.

### Preparation

Wash. Leave roots and 1 inch of tops. Boil 15 to 20 minutes according to size. Drain and dip in cold water. Peel, remove tops, root and blemishes. Slice or dice.

### Scalding

No further scalding is needed. Package and freeze.

## BROCCOLI

### Varieties

Italian Green Sprouting, Freezers' Sprouting Green.



### **Preparation**

Select tender, dark green compact heads with sound stalks. Trim off large leaves and woody stems. Wash well and soak, heads down, in salted water (4 teaspoons salt to 1 gallon water) for about ½ hour. Separate bunches and split lengthwise. Cut to fit container.

### **Scalding**

4 minutes.  
Chill in iced water and drain. Package and freeze immediately.

## **CARROTS**

### **Varieties**

Red Core Chantenay, Nantes Coreless and Imperator.

### **Preparation**

Select smooth, tender carrots before the roots become woody. Scrub with stiff brush or scrape. Wash and trim. Dice into ¼ inch cubes or slice lengthwise about ¼ inch thick.

### **Scalding**

3½ minutes  
Chill and drain. Package and freeze immediately.

## **CAULIFLOWER**

### **Varieties**

Snowball

### **Preparation**

Select white, compact heads. Break flowerlets into pieces about 1 inch across. Wash.

### **Scalding**

Small pieces—3 minutes  
Medium pieces—4 minutes  
Chill and drain. Package and freeze immediately.

## **CORN**

### **Varieties**

Honey June, Golden Cross Bantam, Aristogold, Bantam and Iona.

### **Preparation**

#### *Whole Grain Style*

Silk, trim and wash  
Scald—5 minutes  
Chill, cut from cob, pack dry.

#### *Cream Style*

Cut kernel tips and scrape milk from cob. To 2 cups corn add ½ cup hot water. Boil 3 minutes stirring constantly. Chill over chipped ice. Pack and freeze immediately.

#### *Corn-on-the-Cob*

This does not yield as good a product as corn off the cob. If attempted, a hole should be bored lengthwise through the center of the cob before scalding. Scald 8 to 11 minutes depending on the size of the cob. Chill quickly, package and freeze immediately.

## **EGGPLANT**

### **Varieties**

Any garden variety of good color and quality.

### **Preparation**

Choose firm, ripe eggplant, 6 to 9 inches in diameter with smooth skin. Overmature eggplant is unsatisfactory. Wash, peel and slice 1/3 inch thick. Handle quickly. Prepare just enough for one scalding at a time. To retain light color, drop sliced or diced vegetable immediately into a solution of 1/2 teaspoon of ascorbic acid to 1 quart of cold water and submerge for 5 minutes. Also, add the same proportion of ascorbic acid to the boiling water used to scald the vegetable. Lemon juice (3 teaspoons per quart) or citric acid (1 teaspoon per quart) may be substituted for the ascorbic acid with fairly good results.

### **Scalding**

4 minutes. Then chill in cold water and drain thoroughly. Place two pieces of freezer paper between slices. Pack in carton, or wrap in freezer paper and freeze immediately.

## **OKRA**

### **Varieties**

Dwarf Green, Green Velvet.

### **Preparation**

Leave whole and sort. Use only tender young pods.

### **Scalding**

Small pods—2 minutes  
Medium pods—3 minutes  
Chill and drain. Package and freeze immediately.

## **PEAS, FIELD**

### **Varieties**

Blackeye, cream, purple hull.

### **Preparation**

Use only tender fresh product. Shell. Wash and sort.

### **Scalding**

Small peas—3 minutes  
Medium peas—4 minutes  
Chill and drain. Package and freeze immediately.

## **PEAS, ENGLISH**

### **Varieties**

Thomas Laxton, Little Marvel, Laxtons Progress, Alderman.

### **Preparation**

Shell, sort out immature, starchy, tough and overlarge peas. Wash.

### **Scalding**

Small peas—1 minute  
Medium peas—1 1/2 minutes  
Large peas—2 minutes  
Chill and drain. Package and freeze immediately.

## **PEPPERS**

### **(GREEN AND PIMIENTO)**

### **Varieties**

Any good garden variety.

### **Preparation**

Wash and cut into halves, quarters or slices. Remove seed. Peppers lose their crispness when frozen, but are excellent for hot dishes. Pimiento peppers may be peeled by roasting them in an oven at about 400° F. for 3 or 4 minutes until peel dries and cracks. Cool and pack dry without additional heating.

**Scalding**

Halved green peppers—3 minutes  
 Quarters and slices—2 minutes  
 Chill and drain. Package and freeze immediately.

**PUMPKIN****Varieties**

Small Sugar, Connecticut Field, Cushaw.

**Preparation**

Peel. Discard seeds, cut into small pieces. Cook until soft. Mash, and chill over chipped ice. Package and freeze immediately.

**Scalding**

No further heating necessary.

**RHUBARB****Varieties**

Victoria McDonald.

**Preparation**

Use only tender, crisp stalks. Wash and cut into 2 inch pieces.

**Scalding**

1½ minutes  
 Chill and drain. May be packed dry or covered with medium sugar syrup as for fruit. Freeze immediately.

**SPINACH AND OTHER GREENS****Varieties**

Spinach (Bloomsdale Savoy, Giant Nobel, King of Denmark Varieties)

Other greens — Swiss Chard (Lucullus Variety), Turnip Greens, Mustard Greens, Tender Greens.

**Preparation**

Use only fresh, tender leaves. Remove blemishes and stems.

**Scalding**

Spinach—1½ minutes.  
 Scald only 1 lb. at a time in a large quantity of water.  
 Other greens—2 minutes  
 Chill and drain. Package and freeze immediately.

**SQUASH (WINTER)****Varieties**

Fordhook, Table Queen, Golden Delicious, Hubbard.

**Preparation**

Peel, discard seeds, cut into small pieces. Cook until soft. Mash and chill over chopped ice. Package and freeze immediately.

**Scalding**

No further heating necessary.

**SQUASH (SUMMER)****Varieties**

Yellow Crookneck, Yellow Straight Neck, Zucchini, Coccinelle, Early White.

**Preparation**

Wash, and cut into ½ inch pieces.

**Scalding**

Small—3 minutes  
 Medium—4 minutes  
 Chill and drain. Pack dry and freeze immediately.

## ... *Freezing Fruits*

### ● SELECTION AND PREPARATION

Use only sound, ripe fruit for freezing. It should be slightly riper than for canning, but not soft or mushy. Tree or vine ripened fruits contain more vitamins and a richer flavor than fruits picked green and allowed to ripen before freezing.

Certain kinds and varieties of fruits give a better product than others; therefore, be sure to freeze those fruits which give the best quality product.

Fruits are prepared as for eating. Keep fruit cool from the time it is gathered until frozen. The fruit should be washed in cold water.

#### . . . *How to Prevent Discoloration in Certain Fruits*

Some fruits such as peaches, apricots, apples and pears discolor easily. There are several ways to prevent discoloration:

- Use 125 mg. of ascorbic acid (Vitamin C) for each pint of fruit. Ascorbic acid comes in tablets of 25 mg., 50 mg., and 100 mg. Use  $1\frac{1}{4}$  100 mg. tablets. Dissolve the tablet in the sugar syrup which is to cover the fruit. Powdered ascorbic acid may also be added to the syrup just before pouring it over the fruit. Use  $\frac{1}{2}$  teaspoon of ascorbic acid per quart of syrup.

- Dissolve  $\frac{1}{4}$  teaspoon citric acid in 1 quart cool water. Leave fruit in solution only 15 to 20 minutes before packing in sugar syrup. Use about a gallon of solution for a bushel of fruit.

- There are some special commercial preparations of ascorbic acid for frozen fruits on the market. These usually contain added sugar and citric acid. When using commercial mixes, follow manufacturers directions and be sure to use enough liquid to cover the fruit.

These materials may be obtained from druggists or where

other freezing supplies are sold.

## ● PACKING

Most fruits are best packed in a sugar syrup, although a dry-sugar pack is preferred for berries and may be used also for other fruits. Sugar or sugar syrup helps most fruit to hold its shape, color, and flavor.

### SYRUP PACK

- Dissolve required amount of sugar in boiling water. **CHILL THOROUGHLY** before pouring over prepared fruit.

- Place the prepared fruit in containers and cover with syrup. Allow about  $\frac{1}{2}$  inch at top of container for expansion. For fruits that darken, place crumpled locker paper between lid and fruit to keep fruit submerged.

- Label containers with name of fruit, type of pack and date.

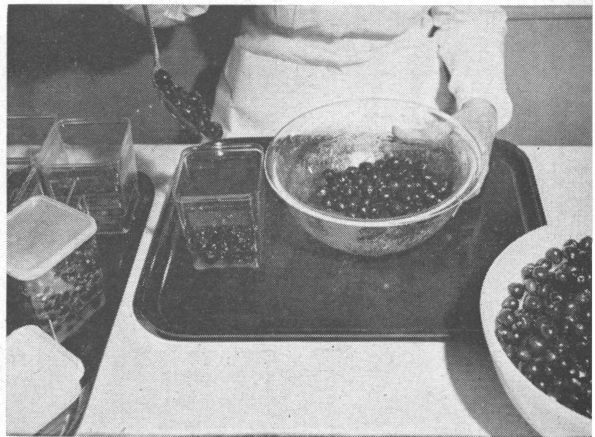
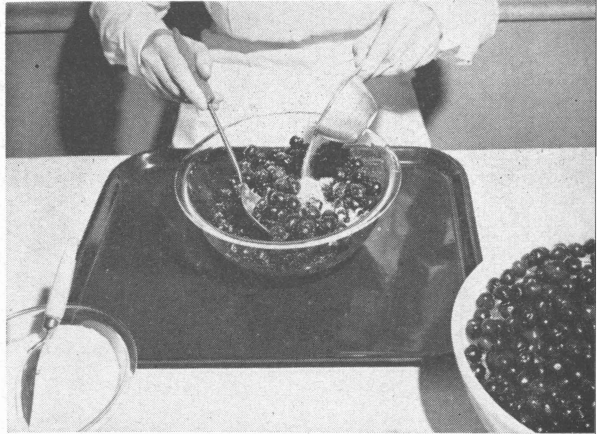
### SUGAR PACK

- Place prepared fruit in a bowl. To avoid crushing berries, do not place more than about 2 pints of berries in the bowl.

- Sprinkle required amount of sugar over fruit and allow to stand a few minutes until the sugar begins to dissolve in the fruit juice which will be drawn from the fruit.

- Gently stir fruit until each piece is coated with sugar and juice.

- Pack fruits tightly into containers, but do not crush. Label containers with name of fruit, type of pack and date.



# *... Fruits for Freezing*

## **APPLES**

### **Varieties**

Rhode Island Greening, Jonathan, Winesap and Stark.

### **Preparation**

Wash, peel, trim, core and slice. Treat to prevent discoloration. See page 12 for directions.

### **Pack**

Cover with cold sugar syrup using 3 cups sugar to 4 cups water. Apple sauce also may be frozen. Add dry sugar to taste. Package and freeze immediately.

## **APRICOTS**

### **Varieties**

Blenheim, Royal, Tilton.

### **Preparation**

Wash, halve and pit. Treat to prevent discoloration. See page 12 for directions.

### **Pack**

Cover with cold sugar syrup using 3 to 4 cups sugar to 4 cups water. Package and freeze immediately.

## **BLACKBERRIES**

### **Varieties**

Eldorado, Himalaya, Lawton and wild varieties.

### **Preparation**

Select fully ripened berries discarding imperfect ones. Handle as little as possible. Wash, cap and drain.

### **Pack**

Dry sugar pack using 1 lb. sugar to 4 lbs. berries or sugar syrup using 3 cups sugar to 1 quart water. Package and freeze immediately.

## **DEWBERRIES**

### **Varieties**

Boysenberries, Regal-Ness, Youngberries, Dallas.

### **Preparation**

Select fully ripened berries, discarding imperfect ones. Handle as little as possible. Wash, cap, and drain.

### **Pack**

Dry sugar pack using 1 lb. sugar to 4 lbs. berries, or sugar syrup using 3 cups sugar to 1 quart water. Package and freeze immediately.

## **CANTALOUPE**

### **Varieties**

Hale's Best, Heart of Gold, Texas Resistant No. 1, and Perfecto.

### **Preparation**

Peel and remove seeds. Cut into about 1-inch cubes or make melon balls.

### **Pack**

Pack dry using no sugar. If desired, sugar may be used either dry (1 lb. sugar to 5 lbs. cantaloupe) or sugar syrup made of 1 cup sugar to 3 cups water. Package and freeze immediately.

## CHERRIES

### Varieties

(Sour) Montmorency, English Morello.

### Preparation

Sort, wash and drain. Remove pit, if desired.

### Pack

Dry sugar using 4 lbs. of fruit to 1 lb. of sugar or use a sugar syrup of 3 cups sugar to 4 cups water. Package and freeze immediately.

## CITRUS FRUITS

### Varieties

Valencia and Temple Oranges, all varieties Grapefruit and Tangerines.

### Preparation

Knife-peel fruit, removing all white membrane and fiber. Separate segments and remove seed.

### Pack

Use sugar syrup made from 2 cups sugar to 1 quart water. Package and freeze immediately.

## CITRUS JUICES

### Varieties

All varieties.

### Preparation

Ream fruit at low speed to minimize amount of air entering the juice. Strain juice and chill immediately.

### Pack

Dry sugar to taste. Package and freeze immediately.

## CRANBERRIES

### Varieties

All varieties.

### Preparation

Sort and wash thoroughly.

### Pack

Freeze whole without sugar; or pack in 1 lb. sugar to 3 lbs. berries, or pack in sugar syrup using 4 cups sugar to 4 cups water. Cranberries also may be crushed for sauce or the sauce may be made and chilled before freezing. Package and freeze immediately.

## FIGS

### Varieties

Magnolia, Celestial, Kadota, Mission, Brown Turkey.

### Preparation

Use only ripe figs. Wash, peel if desired. Remove stem. Leave whole or halve.

### Pack

Cover with sugar syrup using 3 cups sugar to 4 cups water. A dry sugar pack also may be used with 1 lb. sugar to 4 lbs. fruit. Package and freeze immediately.

## GRAPES

### Varieties

Muscadine, Concord, Thompson Seedless.

### Preparation

Use ripe, firm grapes. Wash and remove stems.

**Pack**

Cover with sugar syrup using 3 cups sugar to 1 quart water. Package and freeze immediately.

**MANGOES****Varieties**

Pirie, Fairchild and Haden.

**Preparation**

Sort, wash, peel and slice.

**Pack**

Use sugar syrup of 1 cup sugar to 2 cups of water. Package and freeze immediately.

**PEACHES****Varieties**

Elberta, Hiley, J. H. Hale, Leona Hale Haven, Frank (cling).

**Preparation**

Wash and peel firm, ripe fruit. Treat to prevent discoloration. See page 12 for directions.

**Pack**

Cover with sugar syrup using 3 cups sugar to 1 quart water. Package and freeze immediately.

**PERSIMMONS****Varieties**

Large tame, Fuyu, Hachiya.

**Preparation**

Select ripe fruit. Peel, cut into quarters and remove seed.

**Pack**

Dry sugar pack using  $\frac{1}{2}$  cup sugar per quart fruit. Pulp also may be crushed and frozen using 1 tablespoon sugar and 1 teaspoon lemon juice per cup of pulp. Package and freeze immediately.

**PINEAPPLE****Varieties**

Sugar loaf.

**Preparation**

Wash, peel, and slice.

**Pack**

Sugar syrup made from  $2\frac{1}{2}$  cups sugar per quart of juice and water. Dry sugar pack also may be used with  $\frac{1}{2}$  cup sugar per quart of fruit. Package and freeze immediately.

**PLUMS****Varieties**

Bruce, Methley, Santa Rosa.

**Preparation**

Wash and remove stem. Slice large ones and remove pit if desired. Very soft plums may be made into puree.

**Pack**

Sugar syrup using 3 to 5 cups sugar to 1 quart water. A dry sugar pack also may be used of 1 lb. sugar to 3 to 5 lbs. fruit. Package and freeze immediately.



## STRAWBERRIES

### Varieties

Klondike, Ranger, Blakemore, Missionary.

### Preparation

Select fully ripened berries discarding imperfect ones. Handle as little as possible. Wash, cap, and drain. Leave small fruit whole and slice large fruit.

### Pack

Dry sugar using 1 lb. sugar to 3 to 4 lbs. fruit. A sugar syrup pack, 3 to 4 cups of sugar to 1 quart water is equally desirable for whole berries. Package and freeze immediately.

## FRUIT JUICES

Fruit juices should be heated before being frozen.

- Heat apricots, berries, red cherries, grapes and plums thoroughly (but do not boil) in a small amount of water before extracting juice. Extract juice from apples and white grapes and heat thoroughly in a double boiler.
- Add some sugar to all juices. Use as little as 1 cup sugar to 6 to 8 cups juice.
- Chill the juice. Pour into suitable containers, label and freeze.

## *... Freezing Miscellaneous Foods*

### BUTTER

Freeze fresh, thoroughly washed butter made from good cream with no off flavors. Wrap in good packaging material even if previously wrapped in parchment. Butter made from milk which has not been pasteurized turns rancid or acquires off flavors in 2 or 3 months. Pasteurized butter may be stored 4 to 6 months.

### COTTAGE CHEESE

Creamed cottage cheese loses quality when frozen due to change in texture. Wash curd, salt lightly (do not cream) and freeze. Salt to taste before serving.

### CREAM

Heavy cream containing not less than 40 percent butterfat may be frozen. Pasteurize by heating the cream at 145° F. for 30 minutes. For best results add about 1/3 cup sugar to 1 quart cream before freezing, and store at 10° to 15° below zero. The cream, however, may be held for about 3 months at zero.

### ICE CREAM

For top-quality desserts, ice cream should not be stored longer than about 3 weeks.

## EGGS

Eggs should be broken for freezing, preferably after cooling them to about 32° F. Egg whites and yolks may be frozen separately or mixed. Egg whites need no treatment, but 1 tablespoon light colored corn syrup should be mixed with 2 cups of egg yolks (or a mixture of yolks and whites) to prevent undesirable coagulation of the yolks during storage. Salt (1 teaspoon per cup of yolks) may be used instead of corn syrup if the product is to be used for mayonnaise. Clean dirty eggs before breaking. Before pouring each egg into the mixing bowl, break into a small dish to be sure that it has no stale odor. Freeze eggs in small containers and use promptly after thawing. They should not be allowed to stand. Thawed eggs may be used the same as fresh eggs for cakes, meringues, omelets and scrambled eggs.

The following preparation should be followed for correct measurement:

- 1 tablespoon yolk is equal to 1 egg yolk
- 2 tablespoons whites are equal to 1 egg white
- 3 tablespoons yolks and whites are equal to 1 whole egg

## PECANS

Freshly shelled pecans may be packaged in cellophane bags, tin cans or heavily waxed cartons. Seal, then store at 0° F.

## *Preparing Frozen Foods for the Table*

The natural quality, fresh flavor, color, and texture of frozen food depends as much on the way it is handled from freezer to table as from garden to freezer.

In using frozen foods remember that:

If quality products are served on the table, quality products must be used for freezing.

Frozen foods have a special appeal to the modern homemaker because they are convenient and easy to prepare.

*Caution:* Do not attempt to refreeze any kind of food.

. . . **Using Frozen Vegetables**

Many kinds of vegetables lend themselves to freezing. The homemaker has a wide choice which should make meal planning easy. Use a minimum amount of water in cooking frozen vegetables. Frozen vegetables require only 1/2 to 2/3 the cooking time of the corresponding fresh vegetable. *Do not overcook!* No vegetable except corn on the cob should be completely thawed before cooking because shrinkage and loss of ascorbic acid (Vitamin C) will occur.

Serve foods as soon as prepared. Holding foods after cooked results in loss of nutrients, color, flavor and texture.

Suggested amounts of water and time for cooking some frozen vegetables follow:

1 pint cut sweet corn . . . 1/4 to 1/2 cup water . . .	.3 to 6 minutes
1 pint green beans . . . . . 1/4 to 1 cup water . . .	.8 to 14 minutes
1 pint lima beans . . . . . 1 to 2 cups water . . .	1.5 to 20 minutes
1 pint peas . . . . . 1/4 to 3/4 cup water . . .	.4 to 8 minutes
1 pint asparagus . . . . . 1/4 to 1/2 cup water . . .	.5 to 15 minutes
1 pint broccoli . . . . . 1/4 to 1/2 cup water . . .	.3 to 6 minutes
1 pint spinach and other greens . . . . . 0 to 1/4 cup water . . .	.3 to 6 minutes

. . . **Using Frozen Fruits**

Frozen fruits are a boon to the busy homemaker as they can be made quickly into a delicious dessert or served partially or completely thawed. Fruit should be left in original unopened package while thawing and should be served as soon as thawed. Rapid thawing is best.

. . . **Thawing Fruit**

The average time required for completely thawing a pint package of fruit:

Refrigerator (on shelf) . . . . .	4 to 6 hours
Room temperature . . . . .	2 to 4 hours
In front of electric fan . . . . .	50 minutes

Use thawed fruits as one would use fresh fruits in pies, tarts, cobblers, short cakes, muffins, upside down cakes, and frozen desserts.

. . . **Using Frozen Meats**

Meat can be cooked either while frozen or after it has thawed. The meat will be more uniformly cooked if thawed before cooking and there will be less loss of juices and flavor. The cooking time for unthawed meat is increased 15 to 20 minutes per pound. Cook completely thawed meat exactly as fresh meat. During the thawing time keep meat in original package.

. . . **Thawing Meats**

Refrigerator (on shelf) . . . . . 5 to 8 hours per pound  
Room temperature . . . . . 2 hours per pound  
Room temperature  
in front of electric fan . . . . . 45 minutes per pound

Thawed frozen meat deteriorates more rapidly than fresh meat. Begin cooking immediately after meat has thawed. Cook thawed meat at low even temperature for less shrinkage. Follow same directions as for cooking fresh meats when using thawed frozen meats in roasting, broiling, pan-broiling, braising, stewing, and frying.

. . . **Using Frozen Poultry**

Thaw poultry in the package on a shelf in refrigerator, or if time does not permit, at room temperature, or in front of an electric fan. Poultry for roasting should be completely thawed and then cooked at once as fresh poultry. It is not necessary to completely thaw broilers or fryers but extra cooking time should be allowed. Start at lower cooking temperature in order to get a uniformly cooked product.

. . . **Thawing Time**

Allow 6 hours per pound to defrost a fowl in household refrigerator and approximately one hour per pound to thaw at room temperature.

. . . **Freezing Ready-to-Eat Foods**

Many cooked foods such as chow mein, chili, baked beans, stew and chicken a-la-king may be frozen ready to serve except for heating. Baked foods as cakes, cookies, and rolls may also be frozen ready to serve except for thawing and in some cases, heating. In fact, freezing is the only

method of preserving some of these foods. All cooked foods do not freeze successfully, particularly cooked egg whites.

. . . **Cooked Foods**

Combination dishes and soups which require a long cooking period can be cooked in larger quantities than usual. Then freeze and store them away for future use. You will save much time because the heating time for these foods is only a small fraction of their original cooking time. Most soups freeze well. All types of cooked foods should be packed as solidly as possible to avoid air spaces in the container. Gravy and sauces are desirable with meats because they fill air spaces.

*Do not overcook* foods to be frozen. For stew, add the vegetables when the meat is nearly cooked. Do not overcook dishes containing meat. Meat should be tender, but firm. Keep the saucepan covered during the entire cooking period. Simmer; do not boil. Before the food is completely cooked, the amount to be frozen should be taken from the saucepan, cooled, properly packaged in containers, and frozen immediately.

*Cooling and Freezing*—Cool the cooked foods promptly and rapidly to prevent continued cooking. Loss of flavor occurs rapidly when foods are held at high temperatures and there is danger of food spoilage.

Large quantities of food are difficult to cool rapidly. To hasten cooling, partially submerge the saucepan of cooked food in a large pan of iced water until the food is cooled. Stir occasionally with a fork, being careful not to mash or break up the food. Keep the saucepan covered to reduce loss of flavor.

After cooling, package immediately in frozen food containers of the size suitable for your family. Label and date. Place in freezer and store at 0° F. or colder.

*Heating the cooked food*—The heating process completes the cooking. Heat the food in a covered saucepan, with a small amount of melted fat or butter in the bottom of the pan, or place in a double boiler, or put in a covered casserole dish and heat in a moderate oven. Creamed dishes,

stews, creamed soups, and similar dishes which scorch easily should be reheated in a double boiler. If necessary, break up large pieces of the frozen foods with a fork, but stir as little as possible. Heat rapidly to prevent unnecessary loss of flavor. Do not overcook. Prolonged heating will change the texture and cause a greater loss of vitamins. Serve all foods immediately after cooking.

*Length of Storage*—Ready-to-eat foods are convenient to have in your freezer, but do not overestimate your needs. A rapid turnover is the secret to success because many of these foods lose their distinctive flavors after 2 to 3 months of storage.

The ingredients for most cooked dishes can be purchased the year round, so there is little reason for using limited freezer space by stocking up with an abundant supply.

. . . **Roasted and Fried Meats**

Left-over roasted meats such as beef, pork, ham, chicken and turkey with dressing and gravy, and swiss steak covered with gravy freeze satisfactorily. Fried foods are the least desirable for freezing because they are likely to become rancid after relatively short storage, and when heated they develop a warmed-over flavor.

. . . **Baked Beans**

Baked beans freeze and store well if the salt pork is fresh.

. . . **Seasonings**

Because the flavor of cloves and garlic become stronger during storage, these seasonings should not be added before freezing. Onions in stews gradually lose flavor, and sage tends to lose strength.

. . . **Left-Overs**

Freezing simplifies the problem of what to do with left-overs. Instead of serving them at the very next meal freeze them. Do not allow them to stand around before freezing, but cool and freeze immediately. Store for only a couple of weeks. Left-overs are likely to have a warmed over flavor when heated because they have been completely cooked before freezing.

## PIES

It takes little extra work to make 4 or 5 pies instead of one or two. Although a frozen pie crust is not quite as flaky as that of a fresh pie, it runs a close second.

*Pies Suitable for Freezing*—Fresh fruit pies; vegetable pies such as squash, pumpkin, and sweet potato; mince pies; and chocolate and lemon chiffon pies freeze successfully. Most custard pies do not freeze successfully. Meringue toppings tend to toughen, shrink, separate, and stick to the wrappers. Baked and unbaked pie shells and graham cracker shells may also be frozen. Meat pies are excellent for freezing.

*Freezing Pies*—Pies may be frozen baked or unbaked with equally good results. To prevent a soggy bottom crust, spread a coating over the pie plate before lining with pastry. This coating is made with two parts shortening or lard and one part flour, creamed well.

After lining the plate, brush a film of melted fat over the pastry. This will seal the pastry and prevent the crust from becoming soggy.

If frozen fruit is used for filling, let it thaw just enough to allow handling. If the fruit is very juicy, pour off any excess juice and thicken the remainder with corn starch or tapioca. Cool quickly and pour over frozen fruit. Fill the pie and freeze it immediately. If a pie is to be frozen unbaked, do not cut or stick holes in crust until baking is started.

Cool a baked pie rapidly, then place the unwrapped pie in the freezer. Both baked and unbaked pies freeze faster unwrapped, and they are easier to wrap after freezing. Keep pie level while freezing. Before wrapping, place another pie plate over the top to protect the crust.

*Thawing pies*—When ready to use, place the unbaked pie



in oven while still frozen. Bake at 425° to 450° F. for 15 to 20 minutes; complete baking at 350° F. The baked fruit or vegetable pie should be heated in a 350° F. oven.

*Freezing Pie Mixes*—Frozen pies are bulky, so where freezer space is limited, it is wise to package special pie mixes in frozen food containers. A pint container holds about the right amount for an 8-inch pie.

Ingredients for squash, pumpkin, and sweet potato pies including the milk, the thickening agent, sweetening, eggs (if needed), and spices (except cloves) may be mixed together and frozen. When ready to use, partially thaw in the original container. Add other ingredients (if necessary) and pour into pastry-lined pie pan.

*Storage*—Do not store pies for more than 8 weeks at zero unless the crust is made with lard containing an antioxidant. (An antioxidant is an ingredient added to lard to prevent its becoming rancid.)

## **CAKES**

Most cakes and cup cakes may be frozen satisfactorily. The cakes may be baked on a “slack day” and then frozen and stored until needed. If cake batter is frozen, the results are quite uncertain because the batter may lose some of its rising capacity during freezing and thawing. Also, it is simpler to thaw out a baked cake than to thaw out the batter, then bake, and then cool the cake. From the standpoint of time, work, and quality of the finished product, cakes baked before freezing are more practical.

*Freezing Baked Cakes*—Completely cool the baked cakes before packaging. The type of wrapping material is not as important for cakes to be eaten within a few days as it is for cake that is to be stored for a longer period. For long storage periods, package in moisture-proof materials. If desired, package in “family-size” pieces. Label and date. Cakes do not freeze solid. After wrapping and freezing, place the cake in a metal container or heavy carton for protection from being crushed.

*Frostings and Fillings*—For best results, do not frost or fill cakes before freezing. Some frostings do not freeze satisfactorily, and fillings tend to make the cake a bit soggy. Frost-



ings made with confectioner's sugar and fat are among the most satisfactory. Some cooked frostings have a tendency to stick to the wrapper. Methods of eliminating some of this sticking is to freeze the cake before wrapping, or put tooth-picks around the top of the cake to prevent contact of the frosting with the wrapper.

*Thawing Baked Cakes*—Thaw baked cakes in their original wrappings to prevent formation of moisture on the surface of the cake. A large cake will thaw in about two hours at room temperature. If quicker thawing is desired, the time may be reduced about one-third by thawing in front of an electric fan.

*Length of Storage*—When properly wrapped, baked cakes remain in top condition about three to four months. Fruit cakes may be stored considerably longer.

## COOKIES

Freeze cookies baked or unbaked, whichever you prefer. Both methods will produce excellent results.

*Freezing, Thawing, and Baking Cookie Dough*—Freezing the cookie dough is considered the simplest method. It takes up much less freezer space, but of course, requires more work after freezing than baked cookies.

Shape dough for refrigerator cookies into a roll of desired diameter. Wrap in locker paper and freeze. When ready to use, remove from freezer, slice with a sharp knife. Place on greased cookie sheet and bake in usual manner. Or, if you desire, chill the dough for several hours in refrigerator and slice into cookies before freezing. Package the unbaked cookies in layers in frozen food containers. Separate each layer with two sheets of waxed paper. Keep layers at a minimum to avoid crushing. When ready to bake, place the frozen unbaked cookies on a greased cookie sheet. Bake.

Pack drop cookie dough in frozen food containers. When ready to bake, thaw dough until soft enough to drop by spoonfuls onto greased cookie sheets.

Cookie dough frozen in pans may be slipped into the oven without previous thawing. The layer of dough is so shallow that it will thaw out rapidly in the oven. Bake in

**usual manner.** If dough is packaged in containers, thaw until product can be easily transferred into baking pan.

*Freezing Baked Cookies*—Cool the cookies after baking. Package in frozen food containers, cookie jars, or canisters with tight fitting covers.

*Thawing Baked Cookies*—Thaw cookies at room temperature in original containers. The thawing period will be very short.

*Length of Storage*—Cookies and cookie dough may be stored about three months.

## **YEAST BREADS AND ROLLS**

Bread and rolls may be frozen baked or unbaked. If the proper methods of packing, freezing, and storing are followed, baked rolls will be just as light and tender after freezing as they were before. If unbaked rolls are put into the freezer, the results cannot always be predicted. There is still much to learn about the effect of freezing on yeast. Unbaked dough seems to lose some of its rising capacity after being frozen and thawed, and the texture of the rolls may be tougher and the volume smaller.

*Freezing Baked Rolls and Bread*—Use a favorite plain or sweet dough recipe and bake in the usual manner. After baking, remove from pans and cool to room temperature. Wrap in moisture proof paper or package in frozen food containers.

*Thawing and Heating Baked Rolls*—Reheat frozen baked rolls in their sealed wrappings in a 250° F.-300° F. oven for 15 minutes, or remove them to a paper bag or aluminum foil and heat them in the oven in the same manner as day old rolls except for a longer time. The reheating freshens the rolls.

*Thawing Baked Breads*—Thaw in original wrapper at room temperature. Bread thaws in a short time because it contains very little moisture. Slices of frozen bread may be put into the toaster without thawing.

*Length of Storage*—Do not store baked products longer than about three months.

*Freezing Shaped or Bulk Dough*—Allow dough to rise until double in bulk. Shape into rolls, rings, and loaves or freeze in bulk form. The shaped product will take the least amount of preparation when you are ready to bake it. Freeze bulk dough flat (about 1 to 1½ inches thick) for quicker freezing and thawing. Grease all surfaces. Package in moisture-proof wrappings or containers. Place two sheets of locker paper between layers.

*Thawing Dough*—When ready to use, allow dough to thaw in a warm, moist place away from drafts. Thaw frozen bread dough in the wrapper to prevent surface drying which may result in streaks in the baked loaf. Shape bulk dough and let rise. Place shaped rolls in greased muffin pans and shaped loaves in loaf pans and allow to thaw and rise in a warm, moist place. Bake as usual.

*Length of Storage*—Do not store unbaked dough longer than 2 to 4 weeks.

### **QUICK BREADS**

Quick breads such as baking powder biscuits, muffins, and nut breads may be frozen baked or unbaked. The results will be similar to those for yeast breads.

*Freezing and Thawing the Baked Quick Breads*—Cool the product and package the same as yeast breads. Freeze immediately. When ready to serve, thaw in original wrappings at room temperature. Warm in a 250°-300° F. oven, if desired.

*Length of Storage*—Do not store baked quick breads longer than about three months.

*Freezing and Thawing the Unbaked Product*—Freeze batters in baking pans and wrap with moisture-proof paper. When ready to bake, thaw at room temperature, but do not allow batter to stand before baking. Bake in usual manner. Freeze cut baking powder biscuits in frozen food containers. Partially thaw before baking.

*Length of Storage*—Do not store longer than about two to four weeks.

### **SANDWICHES**

*Sandwich Fillings*—Luncheon meats, left-over sliced roast

beef, roast pork, baked ham, chicken, turkey, dried beef, tuna, salmon, sliced cheese, cheese spreads, hard-cooked egg yolks, and peanut butter make good fillings. Add sliced or chopped olives, and chopped dill or sweet pickles to any of these. If desired, fillings and spreads may be frozen separately in frozen food containers for later use.

All sandwich spreads do not freeze satisfactorily. Jelly, mayonnaise, and salad dressings used as spread soak into the bread. Hard-cooked egg whites develop off-flavors and change in texture. Do not freeze lettuce, celery, tomatoes, and carrots. Add these to the sandwich after it has been taken from the freezer. The lettuce and tomatoes may be slipped into the sandwiches at the time of eating. Frozen slices of bread may be used to make sandwiches.

*Packaging*—Wrap sandwiches separately in good wrapping material. Pack the sandwiches in containers for protection from crushing. Label and date.

*Length of Storage*—The storage life for most sandwiches is about three weeks.

**Suggested Plan for Keeping Records of Frozen Food in Storage**

A simple notebook may be used in which the date, name of food and number of packages may be recorded. When one package is removed from the freezer, that package number is marked out.

A suggested plan is shown below after a box of strawberries and one of dewberries have been removed from the locker. If care is not taken to number the packages, a mark may stand for each package as in the case of pork chops.

Date	Food	Package Numbers
4/1/49	Strawberries	<u>1</u> , 2, 3, 4, 5, 6, 7, 8, 9, 10
4/2/49	Strawberries	11, 12, 13, 14, 15, 16, 17, 18
5/1/49	Dewberries	<u>1</u> , 2, 3, 4, 5, 6, 7, 8, 9, 10
5/3/49	Dewberries	11, 12, 13, 14, 15, 16, 17, 18
1/6/49	Pork Chops	<u>1</u> , <u>1</u> , <u>1</u> , 1, 1, 1, 1, 1, 1, 1, 1

Cooperative Extension Work in Agriculture and Home Economics, The Texas A. & M. College System and United States Department of Agriculture Cooperating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. 25M. 3-51, Reprint.