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# FOOD

Steve

# PREPARATION



UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE

AGRICULTURAL EXTENSION SERVICE



All these different rolls were made from the same basic dough.

## ABBREVIATIONS, WEIGHTS, VOLUME, TEMPERATURES

### Abbreviations

cc.—cubic centimeter

cm.—centimeter

m.—meter

mm.—millimeter

°C.—degrees centigrade

°F.—degrees Fahrenheit

### Weight and Volume Equivalents

1 gram — .035 oz.

1 kilogram — 2.21 lbs.

1 oz. — 28.35 grams

1 c — 2 gills

1 tbsp. — ½ fluid oz.

1 liter — 1.06 quarts

### Temperatures

#### For Roasting

Beef-rare — 140° F.

Beef-well done — 170° F.

Cured pork — 170° F.

Fresh pork — 185° F.

Poultry — 190° F.

#### For Sugar Cookery

Most jellies — 220-230° F.

Soft ball — 238° F.

Medium hard — 245° F.

Hard ball — 280° F.

Brittles & taffy — 290-310° F.

#### For Deep Fat Frying

Doughnuts — 360° F.

Oysters & fritters — 375° F.

Fish & Chicken — 390° F.

Potatoes & onions — 395° F.

#### For Refrigeration

Storage — 45-50° F.

Frozen food — Around 0° F.

Quick freeze — Min. 10-20° F.

Water boils — 212° F.

Simmers — 160-185° F.

# FOOD PREPARATION V

## Special Meals

FLORA L. CARL AND JOSEPHINE FLORY\*

Cooking can be fun when you learn to do it well. The art of food preparation can be acquired gradually but surely by any intelligent, patient girl or boy. You don't become a good cook all at once, or by just idly wishing. You use your head as well as your hands; you observe and learn to recognize what it takes for a good product. When you can plan, prepare and serve a whole meal, you have made a real achievement.

It's smart for boys as well as girls to know how to cook. Men and boys do much of the food shopping. They find it's convenient and enjoyable to know how to prepare several dishes well such as barbecuing chicken, broiling steaks, frying doughnuts and fish n' chips, and other once-in-a-while foods.

In this project you learn more about meal planning and take over the responsibility for some family and company meals. You will visit food processing plants and markets, and learn to use a pressure saucepan, cooking thermometer, mixer, waffle iron, deep fat fryer, broiler and other equipment.

### BREAD FOR DINNER

The type of bread served with a dinner will vary with the other foods served and the likes and dislikes of the family. A quick bread, such as corn bread, biscuits, or muffins, makes the meal seem more filling than if yeast bread were used. A hot bread is frequently used in place of potatoes, rice or other hot starchy food. When you serve hot breads allow yourself more time for last minute preparation and serving.

Bread is one food common to most countries in the western world. Recipes for interesting foreign breads—quick and yeast—may be obtained from your home agent. You'll like making the many tasty breads that come to us as part of our heritage from other lands.

### YEAST BREAD AND ROLLS

Homemade yeast bread always will be a favorite with many. Some families find it more economical to make rather than to buy most of their bread. Making good yeast bread is an art. Only three ingredients are necessary for yeast bread—flour, liquid, and yeast. Other materials are added to improve the flavor, texture and appearance of the bread.

**Wheat Flour** is best for making bread because it contains much gluten. Gluten is the substance which, when mixed with a liquid, gives an elastic, sticky material from which to form dough and a light bread. The gummy mass left after washing flour or after chewing wheat grains is gluten. Hard wheat flour has more and better quality gluten than soft wheat flour. Cake

\*In collaboration with Marian Beebe, State Club Agent.

flour has very little gluten. Different flours absorb different amounts of liquid so the exact amounts of flour to use cannot be given in a recipe. Flour should be used very sparingly after the first kneading.

**Liquid** used in bread-making may be water, milk, or potato water, or a combination of these. Bread made with potato water or milk keeps fresh longer and toasts better than bread made with water. Milk gives a whiter crumb than potato water.

**Yeast** is a tiny, colorless, oval-shaped plant. For growth it needs air, food, moisture, and the right temperature, 80 to 95°F. The kind and amount of yeast used in bread-making depends upon the time allowed for the process. Extra yeast will shorten the time needed for 'proofing' or raising. Yeast makes the bubbles which cause the dough or batter to rise.

Fat is used to make bread tender. It adds to the flavor of the bread and prolongs freshness. Sugar added in a small quantity increases the activity of the yeast, causes the loaf to brown nicely, and increases the flavor. Salt is added to improve flavor. In too large quantity (more than two teaspoons per cup of liquid) salt will retard the growth of yeast.

Other ingredients often used in yeast breads are eggs, fruits, nuts and spices. These usually are used in fancy breads and rolls. Eggs added to plain bread and rolls increase their nutritive value and give flavor and creamy color to the products; they also improve the texture.

### Basic Yeast Dough For Rolls

1 pkg. dry yeast	1 t. salt
$\frac{1}{4}$ c. lukewarm water	1 c. milk
$\frac{1}{4}$ c. sugar	1 egg, beaten
$\frac{1}{4}$ c. fat	About 4 cups sifted flour

Soften yeast in water. Add  $\frac{1}{2}$  t. sugar. Scald milk and add fat, rest of sugar, and salt. Stir. Cool to 85-90°F., then add egg and stir in softened yeast. Stir flour into liquid ingredients until well mixed. Turn dough out onto lightly floured board and let rest 10 minutes. Knead until smooth and elastic, then place dough in bowl and cover tightly. Let rise in warm place (about 85°F.) until double in bulk—about 1 hour. Turn onto board, knead and shape as desired. Place shaped rolls on a greased baking sheet. Let rise until double in size. Bake.

### Nut Rolls

Roll the dough  $\frac{1}{4}$  inch thick in rectangular shape. Spread with soft table fat, sprinkle thickly with brown sugar and chopped nuts. Roll like jelly roll. Cut crosswise in 1-inch slices. Grease muffin pans and in each one put  $\frac{1}{2}$  t. table fat, 2 t. brown sugar, and a few nut meats. Place a slice of dough in each pan, press down. Cover and let rise until double in bulk. Brush with egg white diluted with water. Bake at 350°F. (moderate oven) about 20 minutes. Turn out of pan at once.

## KEY POINTS IN MAKING YEAST BREADS

Temperature is a major factor in making and baking yeast bread and rolls. If the yeast is chilled or overheated it will stop growing and consequently delay and perhaps diminish the rising process.

The last cup of flour should be added very gradually because if too much is added, the bread will be harsh, dry and crumbly. Sprinkle only a small amount of flour on pastry cloth or board for kneading.

Use a quick even stroke in kneading, pushing with the lower part of the palms, and turning the dough one quarter way around in the third or fourth stroke. Kneading develops the gluten and distributes the gas bubbles formed by the action of the yeast plants on the flour. Knead the dough until it is smooth, velvety, bubbly and elastic to the touch. Resting the dough 10-15 minutes makes it easy to work with and more resilient.

Cover the dough, or grease lightly, while it rises to prevent a crust from forming. A crust will cause streaks in the loaf of bread. Keep the dough at a temperature near 85°F. If it gets too hot—above 95°F.—the bread may have a coarse texture and sour flavor. It has risen enough when the dough has about doubled in bulk and will retain the dent if lightly pressed with the finger.

Bread baked in single loaves bakes evenly, has a better crust, color, and shape than when several loaves are baked in the same pan. Begin baking bread in a medium hot oven, about 385-400°F. for 15 minutes, then lower the temperature to 350°F. and bake until done—about 45 minutes for a one-pound loaf. Bread sounds hollow when thumped and shrinks from the pan when done.

Remove bread from the pan when done and place it on a rack to cool. Wrapping up loaves, or putting them in the box while still warm, favors the growth of mold and frequently results in undesirable odors and flavors, and a soft instead of crisp crust. When cold, freeze or store the bread in a ventilated container, which is frequently scalded and sunned, so it will be free from mold and odor, and yet will keep the bread moist.

### Plain Yeast Bread-(2 loaves)

1 pkg. dry yeast	3 c. milk
3 T. fat	1 T. salt
3 T. sugar	About 9 c. flour

Soften the yeast in  $\frac{1}{4}$  cup lukewarm water (80-85°F.). Scald milk and add the fat, sugar and salt. When the milk mixture has cooled to 90°F., add 4 cups of flour. Beat well. Then add the softened yeast. Add enough more flour to make a soft dough. Mix until the dough forms an elastic ball in the bowl. Cover and let rest 10-15 minutes. This will make the dough easier to knead. Turn out on pastry cloth or board and knead 7-10 minutes. Put back in bowl and cover with lid or damp cloth until double. Punch down, let rise until double in volume and then cut in 2 pieces and shape into loaves. Bake in an oven at 350°F. for 50 minutes.

## Dried Fruit Yeast Bread

Add raisins or other dried fruit, soaked and chopped fine, to any standard bread recipe, and bake in a loaf. Or roll out the bread dough in a square, and spread with melted table fat and a mixture of chopped dried fruit and brown sugar. Roll into a long roll. Cut off crosswise slices, let rise until double in bulk. Bake. Or bake in one big roll for a roly-poly loaf with a dried fruit filling.

### ARE YOUR ROLLS

Smooth, uniform . . . . .	_____
Even golden brown . . . . .	_____
Light and elastic . . . . .	_____
Crumb slightly moist . . . . .	_____
Not crumbly . . . . .	_____
Without streaks . . . . .	_____
Nutty in flavor. . . . .	_____

### IS YOUR LOAF OF BREAD

Smooth, rounded, golden brown. . . . .	_____
Close and lacy in grain . . . . .	_____
Soft and velvety in texture . . . . .	_____
Springy and light . . . . .	_____
Not soggy or sticky . . . . .	_____
Of good flavor. . . . .	_____

## YOU NEED THE RIGHT FOOD

Teenagers are growing and going all the time. You need food—the growing kind (meat, milk, eggs, vegetables and fruits), and the going kind (potatoes, bread, butter, ice cream and cookies) and plenty of it. It's important for you to eat a hearty breakfast, to eat lunch—not just munch—and to enjoy a substantial dinner. Because teenagers often look, feel and work like grown-ups, it's easy to forget that they are still growing faster than at any other time in their life—except when an infant. Their food and sleep needs are greater than those of adults. The foods you have eaten since the day you were born have helped you grow and develop. Your body is in the shape it is partly because of what you've eaten all your life.

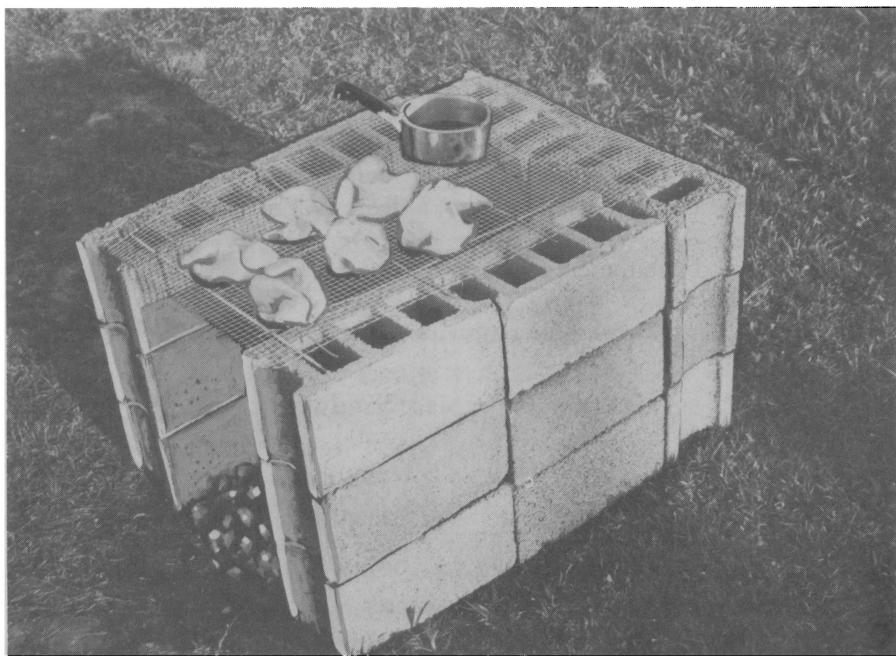
It is easier to get all the food elements you need if you eat a wide variety of foods than if you eat only a few foods. It's a smart 4-H'er who learns to like many different foods. To have a clean plate at the end of every meal is one indication of being a good citizen.

## OUTDOOR BARBECUING

A favorite supper party by boys and men is a barbecue. It's easy to do, lots of fun for any sized group and the food is delicious. Beef, lamb, fish and chicken are excellent barbecued. Served with a combination salad or relish tray, bread, coffee and melon, fruit or ice cream, it's a natural company meal for men to prepare. For detailed information on building the outdoor barbecue pit, talk to your county agent.

### Barbecuing Chicken

Choose broilers or fryers, 2½ to 3½ lbs. live weight. Allow one-half chicken per person. Split in half by removing neck and backbone and cutting through center of breast bone. If chickens are large, quarter by cutting leg



This above-ground barbecue pit can be made from cinder or haydite blocks. For details, see AES Folder 23, *Chicken Barbecue*.

and thigh from breast, wing and ribs. Wood, charcoal or briquettes may be used for heat. Wait until you have a low bed of coals before you begin to cook. Allow 1 to 1 ¼ hours for cooking. Turn the chicken often, basting with barbecue sauce each time it is turned. To test for doneness—twist the drumstick. If it turns easily the chicken is ready to serve. It is best if served as soon as done.

Chicken may be broiled or roasted in the oven and basted with barbecue sauce during all or the last half of the cooking time if barbecuing cannot be done outdoors.

#### Barbecue Sauce

1 c. cider vinegar  
½ c. water  
¼ lb. butter  
½ c. chili sauce

1-2 T. brown sugar  
¼ c. grated horseradish  
¼ c. Worcestershire sauce  
½ t. salt and dash cayenne

Mix ingredients and stir over a low heat until hot. Use to baste meat while broiling or roasting.

### EASY PICNIC FARE

Fish fries, steak fries, and wiener roasts are always fun and require very little preparation at home. Besides a meat you'll need rolls or buns, some crisp food such as apples, celery, pickles, or carrot strips, a beverage and a sweet. Take along salt, a long handled fork, cups, a container for making the drink, and one in which to cook the fish or steak. If you do not build a fire you might like one of the following menus:

1. Potato salad, meat sandwiches, radishes, onions, fresh fruit, iced tea and cookies.
2. Scalloped potatoes and cheese, lima beans, sliced or stuffed tomatoes, gingerbread, and cider.
3. A meat and a vegetable sandwich, fruit salad, cookies, iced cocoa.

#### Outdoor Fireplace Sandwich

12 strips bacon, 1" pieces	1 T. minced onion
4 eggs, beaten	1/2 t. salt
1/4 c. chopped green pepper	4 large buns
1/4 c. finely chopped celery	2 T. butter or margarine

Fry bacon slowly until crisp; pour off fat. Add eggs, vegetables, and seasonings. Scramble egg-vegetable mixture; serve on toasted, buttered buns.

#### DESSERTS—NUTRITIOUS YET DELICIOUS

The dessert should be planned in connection with the foods that make up the meal. If the meal is light—such as cream soup and a relish tray—then the dessert might be pie or upside down cake. When a meal with meat, potatoes, a hot vegetable and a salad is served, a light dessert as plain fruit or a sherbet or ice is appropriate. The right dessert will help make the meal a well balanced palatable interesting one.

Real skill can be demonstrated in making a simple pudding, a beautiful cake or a perfect custard. It isn't hard work to make wonderful desserts but you'll need to learn how—and then practice to perfect the technique.

#### Dried Fruit Cup Cake

2 1/4 c. flour	1 egg, beaten
3 t. baking powder	1 c. dried chopped fruit
3/4 t. salt	3/4 c. liquid from the fruit
1 c. sugar	6 T. melted fat

Sift together the dry ingredients. Combine the beaten egg, fruit liquid and melted fat. Add this mixture to the dry ingredients all at once, and stir until smooth. Pour into greased muffin pans and bake in a moderate oven for about 30 minutes.

### Bread Pudding Delux

Soak 2 cups bread crumbs in 1 quart milk. Add 1 cup sugar, 2 tbsp. butter, 4 beaten egg yolks, and the juice and grated rind of 1 lemon. Stir all ingredients together and bake 1 hour at 350° F. Take from oven and spread jelly thinly over the top. Top with meringue made from the beaten egg whites and 4 tbsp. sugar. Return to the oven to brown.

### Ice Cream for Dessert

Ice cream provides some of all the nutrients of whole milk. It is good for children, but not a substitute for milk. One-seventh of a quart of ice cream has as many calories as a glass of whole milk, but only  $\frac{1}{3}$  as much protein, calcium and riboflavin. However, ice cream provides vitamin A, calcium and riboflavin far exceeding those provided by such desserts as cake and pie.

Ice cream should be firm in body, not fluffy or soggy, smooth in texture, creamy and fine grain—not coarse or icy; its flavor—fresh and characteristic of the flavoring material.

The mechanical refrigerator and the electric mixer have made the making of ice cream easy. Packaged puddings or mixes can be used if it is necessary to further cut down preparation time. Some instant pudding mixes will freeze while you are eating your dinner.

A smooth creamy texture comes partly from beating air into the mixture and partly from stirring it or beating it when it is half frozen to break up any crystals that formed. Be sure to chill the serving dishes so the ice cream will remain firm and tempting.

You don't need to use toppings but they make ice cream take on a festive look. Ready to serve sauces and frosty toppings can be purchased at most grocery stores, but you can make your own sauces and keep them in the refrigerator.

**Using an Ice Cream Freezer**—To freeze ice cream, use one part salt to 8 parts of ice. The freezer cannot be more than three-fourths full of any dessert mixture because it expands on freezing, and crowding causes a coarse texture. Turn at an even rate, slowly at first, but rapidly thereafter. Remove the dasher when mix is frozen to a heavy mush. Close the opening; pack, using 4 parts ice to 1 of salt. Cover well and set aside to ripen, which takes about 3 hours. Gelatin or junket added to frozen milk desserts improves their texture, gives more body and the product does not melt down so rapidly.

**Freezing in the Refrigerator**—Turn the refrigerator control to the coldest point before you begin to make the frozen dessert. When the dessert is frozen to a mush, beat vigorously to break up crystals. Do not let it melt. Use a chilled bowl and beater. When almost frozen thick, beat again. When frozen firm return temperature control to normal. The dessert will have a finer texture and have smaller crystals if served soon after frozen.

**Lemon Sherbet**

1 qt. milk	$\frac{3}{4}$ c. lemon juice (3 to 4 lemons)
1 $\frac{1}{2}$ c. sugar	
1 T. gelatin	2 eggs
1 T. grated lemon rind	

Soften gelatin in  $\frac{1}{4}$  c. water. Blend sugar and eggs, beat until light, add 1 pint of the milk which has been scalded and continue heating in a double boiler until it coats a spoon. Add softened gelatin, and cool. Add to the remaining cold milk, then add the lemon rind and juice, and strain. Freeze to a mush-like consistency using 6 to 8 parts ice to one of salt. Remove dasher. Pack and allow to ripen.

For pineapple sherbet replace half the lemon juice with orange juice and add 1 cup drained crushed pineapple, and use only 1 cup of sugar.

**Blackberry Sherbet**

Grind 1 quart of fresh blackberries. Add  $1\frac{1}{4}$  c. of sugar and heat until the sugar is melted, then cool. Pour 1 quart of whole milk or of fresh, strained buttermilk into a freezer. Add  $\frac{1}{4}$  t. salt. Add the berries and sugar. Freeze.

**Vanilla Ice Cream**

2 c. scalded milk	
1 T. flour	$\frac{1}{3}$ t. salt
1 c. sugar	1 qt. thin cream
1 egg	2 t. vanilla

Mix flour, sugar, and salt; add egg, slightly beaten, and milk gradually. Cook over hot water 20 minutes, stirring constantly at first. When cool, add cream and flavoring. Strain and freeze.

**Butterscotch Sauce**

1 c. firmly packed brown sugar	$\frac{1}{4}$ c. butter
$\frac{1}{3}$ c. dark corn syrup	$\frac{1}{3}$ c. light cream
$\frac{1}{4}$ c. water	$\frac{1}{2}$ t. vanilla

Combine brown sugar, syrup, water and butter. Cook, stirring occasionally, to the soft boil stage, 236°F. This takes about 4 minutes. Remove from heat and let cool slightly. Add cream and vanilla. Beat well and serve warm or cold.

**MIXES SAVE TIME**

Mixes are especially welcome for rush days, holiday seasons and when unexpected guests appear. By using mixes inexperienced persons or those with limited strength or time can successfully prepare foods.

There are many good mixes on the market. If you have butter and other fats it might be smart to use them and make your own mixes. If you meas-

ure accurately and follow directions you probably will have as good a mix as you could buy and you will probably save on the cost.

If the fat used will keep firm at room temperature, the mix need not be stored in the refrigerator. It should be stored in containers with tight fitting lids and of a size needed for the usual recipe, as in pint containers for 2 cups and  $\frac{1}{2}$  pint when 1 cup will be needed. Use mixes within a reasonable length of time. Baked products made from mixes are best served the day they are made.

### Quick Bread Mix With Dry Skim Milk

Measure and sift together three times—12 cups flour,  $1\frac{1}{2}$  cups dry skim milk,  $\frac{1}{4}$  cup baking powder and 2 tbsp. salt. Cut in  $1\frac{1}{2}$  cups fat until evenly blended and mixture looks like corn meal. Store in tightly covered container of pint size for use.

### Orange Puffs

Combine 1 tbsp. grated orange rind and 2 tbsp. sugar with 2 cups quick bread mix. Add  $\frac{1}{2}$  cup water to form a biscuit dough. Blend together 3 tbsp. sugar and  $\frac{1}{4}$  tsp. ginger. Drop biscuit dough by teaspoonfuls into sugar mixture, turn to sugar coat. Place 2 sugar coated balls together in greased muffin cups. Bake at  $400^{\circ}\text{F}.$ , for 12 to 15 minutes.

### Biscuit Mix

To 12 cups flour add 4 tbsp. baking powder and 1 tbsp. salt. Sift. Cut in 1 to  $1\frac{1}{2}$  cups fat that is firm at room temperature, using a pastry blender, blending fork or two knives until the mixture looks like grains of wheat. Place in containers suited to the amount you will usually use at one time. Store in a cool dark place. You need only to add milk for biscuits. Whole wheat or graham flour may be substituted for part or all of the white flour. This mix may be used for various hot breads, dumplings, shortcake, waffles, and quick coffee cake.

### Apple Coffee Cake

Combine 2 cups biscuit mix and  $\frac{1}{4}$  cup sugar. Combine egg and  $\frac{3}{4}$  cup milk and add to first mixture. Spread in oiled pan and brush liberally with melted butter. Peel and core 4 or 5 apples, cut them in uniform slices and stick into the batter close together. Sprinkle evenly with a mixture of  $\frac{1}{2}$  tsp. cinnamon and  $\frac{1}{4}$  cup sugar. Bake at  $375^{\circ}\text{F}.$  for 40-45 minutes.

### Pastry Mix

Sift 6 cups flour and 1 tbsp. salt into a large bowl. Cut in 2 cups of fat until mixture is like small peas. Store. For a one-crust 9" pie, use  $1\frac{1}{2}$  cups mix and 2 to 3 tbsp. cold water. For a 2-crust 9" pie use  $2\frac{1}{2}$  cups mix and 3 to 4 tbsp. cold water. Sprinkle the cold water sparingly over the mix. Toss lightly with a fork, using just enough water to hold the dough together. Press dough gently to form a ball. Chill. Roll from center to outer edges for pie crust.

### Orangeade Mix

Mix 1 cup of concentrated frozen orange juice and 1 cup lemon juice with 1 cup sugar. Stir well. Store in refrigerator. Just before serving time, fill glasses two-thirds full of cracked ice. Pour  $\frac{1}{4}$  cup of the ade mixture in each glass and fill with ice water. Stir. Garnish with a slice of orange or lemon or few mint leaves, and serve.

### GOOD COOKS NEED GOOD TOOLS

A few sturdy, well made, easy to use, easy to clean pieces of equipment will make cooking more fun. Store cooking equipment where it will be easy to use.

You'll need accurate measuring spoons and cups. A narrow spatula may be used to level off dry ingredients, spread sandwiches and fillings, and lift flour and small cookies. A wide spatula, 3 inches, is useful for turning hamburgers and pancakes and for removing cookies, pieces of pie or cake from a pan.

A rubber scraper can help prevent waste of food and time and is excellent for folding a batter into egg white, whipped cream or other such material.

Wooden spoons are comfortable to the hand and well shaped and are excellent for creaming mixtures, stirring hot foods and foods that might discolor when stirred with a metal spoon.

A peeler or knee-action knife is ideal for paring carrots and other thin skinned vegetables and fruits and for making vegetable curls for the relish tray.



Choose cooking utensils carefully and keep them in a handy place.

Vegetable tongs are excellent for turning meat and bacon and for lifting hot vegetables, leafy salads and other foods.

Accurate thermometers make it easier to make good cottage cheese, yeast bread, roasted meat, candy and deep fat fried foods.

Wire strainers, coarse and fine, and wire cooling racks for cookies, bread and cake are desirable. Cookie cutters of various sizes and shapes are fun to use.

Pots and pans are made of various materials, and for special uses. It is usually better to select each piece rather than to buy a matching set. All pans should have straight sides, and flat bottoms that fit well over heat units. A tight fitting lid saves food materials and heat, insures even cooking, and helps prevent escape of steam, keeping walls and curtains cleaner. Pouring lips are not desirable as they waste food material and heat.

Cookie sheets should be at least 2 inches smaller all around than your oven. They should have a shallow rim and be heavy enough to prevent warping. A good roasting pan is shallow and has a rack. It does not need a cover.

Mixing bowls need to vary in size from 1 pint to 2 quarts. Stainless steel is heat proof, light and unbreakable. Plastic is light and usually easy to pour from. Pottery bowls are attractive, but heavy and breakable.

Wax paper, aluminum foil, paper liners for cup cake tins, plastic bags and refrigerator boxes are useful equipment.

Pressure saucepans and broiling pans are time savers. Electric beaters, mixers, blenders, French friers, waffle irons and portable broiling ovens are popular. If stored in a convenient spot, ready to plug in and use, they are used more frequently than if stored in a cupboard.

## USING THE BROILER

Broiling is cooking food directly under or over heat which may be glowing coals, an electric unit or a gas flame. The temperature is largely controlled by the distance the food is placed from the heat. The oven door is usually left ajar, to avoid building up the temperature and cooking from both sides, and to vent the steam.

Many vegetables and fruits, fresh and canned, broil well. Sprinkling sugar over their surface aids in browning. Brushing with fat helps prevent excessive drying.

Sandwiches open faced or double, are a natural for broiling.

Tender beef cut in steaks  $\frac{1}{2}$  to 2 inches thick broil well. Thin steaks should be pan broiled, as they would be over-cooked before they brown. Thick slices of left over roast beef, meat loaf and prepared meats, take on a different flavor if brushed with table fat, barbecue sauce or French dressing and broiled.

Cured pork may be broiled but fresh pork needs more thorough cook-

ing. Too much of the flavor of the pork is in the fat and this would be lost in broiling, so braise the pork chops.

Veal has too much connective tissue and too little fat for successful broiling. The fatter varieties of fish, whole or cut in fillets or steaks, are delicious broiled as are oysters.

### Broiling Meat

Score fat on edge of meat about every inch, to prevent curling while broiling. Brush with table fat to help prevent excessive drying. When half done turn, being careful not to stick fork into the lean meat. Use tongs rather than a fork to keep more juice in the food. Well cooked meat is puffy, well browned, and juicy. Over-cooking gives meat a dry shrunken look.

### Broiled Cheese Sandwiches

Spread slices of bread lightly with butter. Put slices together as for sandwiches: (1) with thick layer of sharp cheese; (2) with a grated cheese mixed with chopped nuts, or honey and grated orange rind, or chopped olives and nuts, or very lightly sprinkled with salt and cayenne pepper. Toast on both sides under broiler or in the oven. Cut while hot into uniform strips, 1 to 2 inches wide. Serve at once.

## USING A PRESSURE SAUCEPAN

A pressure saucepan is a two-in-one cooking pan. It is like a pressure canner in that you can get a higher than boiling temperature and also like a deep skillet, Dutch oven or heavy saucepan. Pressure saucepans vary in size, closures, pressure indicators and controls. It is important that you follow the directions that come with the cooker you are using. It is also very important to time the cooking period accurately as an extra  $\frac{1}{2}$  minute may cause considerable over-cooking.

### Vegetable Chop Suey

2 strips bacon, diced	3 c. diced celery
2 green peppers, diced	4 c. tomatoes
2 large onions, diced	2 T. soy sauce
1 lb. steak, cubed	2 T. molasses
1 c. rice	Salt
4 c. shredded cabbage	Flour

Brown the bacon, lift from the fat. Add the onions, brown and lift from the fat. Flour the cubed meat, when nearly brown add the peppers, salt, bacon and onion and then add in order —cabbage, celery, soy sauce, molasses, tomatoes and the rice that has been washed in hot water. Place cover on cooker, allow steam to flow from vent pipe to release all air from the cooker. Place on weight, and cook 8 minutes at 15 lbs. Menu: Chop Suey, fried noodles, relish tray, lemon sherbet and crisp crackers.

## WAFFLES FOR THE MAIN DISH OR FOR DESSERT

Waffles are a versatile food. They are best if served hot from the iron but left-over waffles may be frozen, then heated in the oven and served later. For the main dish top with creamed chicken, cheese or beef. For the dessert serve with honey butter, preserves or syrup. Nuts, bits of crisp bacon or ginger may be added.

When baking waffles be sure the batter partly fills each compartment. Keep the cover closed and bake the waffle until it stops steaming. The batter may stick if the iron is too hot or not hot enough. If there is no heat control, allow about 8 minutes to heat—water will dance on the iron when hot enough. Lift the waffle off carefully with a fork and serve immediately, or cool, wrap and freeze.

## MEALS FROM THE FREEZER

A well stocked freezer is a handy store for ready-to-heat-and-eat meals. Whole meals can be precooked and frozen, as well as individual dishes. You can prepare such foods as baked beans, boiled ham, nut bread, rolls, brownies, cake, broccoli, lima beans, strawberries, peaches and other food days ahead and then the last minute preparations are simple. Concentrates of lemonade and other fruit drinks freeze well, too. Prebaked pie and tart shells freeze well and for a dessert need only to be filled with fresh or frozen fruit, a custard or pudding. One favorite dress-up company dessert is angel food cake with alternate slices or layers of sherbet or ice cream.

Most precooked frozen foods can be reheated in the oven or on top of the stove. It takes longer in the oven but usually keeps the texture of the food better. When using a double boiler on top of the stove use warm, not hot water in the lower pan so the thawing food won't stick.

## DEEP FAT FRYING

Deep-fat-frying is one of the quickest ways of preparing many foods. Boys, as well as girls, can learn to do deep fat frying. Lots of foods, especially liked by teenagers are cooked by deep fat frying, as French fried potatoes, potato chips, onion rings, doughnuts, fish and chicken.

A plug-in deep fat frying pan with a built-in thermometer, a wire basket, and a safety ring, designed to keep the fat from boiling over, is ideal. Any straight sided sauce pan, that is 7 to 9 inches in diameter, at least 5 inches deep, has a long handle and a basket to fit, is satisfactory.

If you do not have a deep fat thermometer, the temperature of the fat may be tested by the number of seconds it requires to brown a cube of bread. This isn't too accurate, since bread differs in moisture content and no two cubes brown at the same rate. A thermometer for testing fat must register at least as high as 400 degrees so a candy thermometer will not do.

Fat catches fire easily. Watery food should be cooked in small amounts, otherwise the mixture of boiling water and hot fat may boil over. The tem-

perature of the fat varies according to the food to be cooked. For cooked foods, such as croquettes—375° to 385°F.; uncooked foods, like doughnuts, fish, fritters—365° to 375°F.; and uncooked foods containing a large amount of water, like potatoes, onions—380° to 395°F. All fried food should be blotted as soon as done, placed on paper towel or other absorbent paper to take up excess fat.

### Fish 'N Chips for the Hungry Gang

Fish 'N Chips, is a combination of flavorful deep-fat-fried fish and potatoes and has been a favorite in England for years. Outside, the fish should be a crusty, golden brown; inside, it should be tender and juicy with the delicate flavor sealed in. Served with tossed salad and lemon pie, this dish makes a very satisfying meal.

#### Deep-Fat-Fried Haddock Fillets

2 lbs. haddock fillets	Dash pepper
1 egg, beaten	½ c. flour
1 T. milk or water	½ c. bread crumbs
1 t. salt	

Cut fish into serving-size portions. Combine egg, milk and seasonings. Dip fish in egg mixture and roll in flour and crumb mixture. Fry in deep fat, 375°F., for 2 to 4 minutes, or until golden brown. Drain on absorbent paper. Serve plain or with tartar sauce. Serves 6.

### PLANNING THE DAY'S MEALS

Do you know that everybody really needs the same foods? Only the amounts of the different foods vary for different members of the family. The vegetable and fruit for the baby and old person may need to be chopped fine or sieved but all can eat the same vegetables and fruits.

Each meal should be palatable, satisfying and contain: (1) some animal protein, as meat, milk, egg or cheese; (2) a vitamin C rich food, as citrus fruit, tomatoes or raw salad greens; and (3) some energy food as potatoes, bread, butter or cereal. One meal of the day should include a dark green or deep yellow vegetable. The meals of the day should be planned so that as a whole they provide all essential food materials in proper amounts, and yet each meal is different and complete in itself. Aim for simplicity and perfection of detail. There should be color and variety in form, flavor and texture. Have something hot and something cold, something crisp and something soft, some tart and some sweet in every meal. If the foods are cooked right and served immediately they not only look and taste the best but are more nutritious.

Most people will eat the right foods and enjoy them if well cooked and nicely served —without comments. It is a good plan nutritionally and socially to learn to like many or all foods. It makes meal planning easier if all

members of the family like a wide variety of foods. The less time and money you have for meal preparation, the more careful and thorough your plans must be.

### LET'S GET OUR VITAMINS FROM FOODS

Nearly 20 known vitamins are believed to be important to human well-being. A few more vitamins are known to be important to pigs, fish, chickens, or insects, but not to people.

When you eat a variety of food you are pretty sure to get a well-rounded assortment of the vitamins you need—except perhaps vitamin D, which is only found in generous amounts in fish liver oils. And you may be getting from foods other vitamins, still undetected, but serving you just the same.

Separate doses of one or more selected vitamins are best taken under doctors' orders. Research is showing more and more instances in which a vitamin or other nutrient seeks a different nutrient in a meal as a special partner to assist in its work. When a vitamin pill brings in a mass army of vitamins, the right partners may not be ready to use so much specialized help.

### OVEN MEALS

Oven meals require planning ahead but they save fuel and can free you from much last-minute preparation. Oven meals are good company meals and convenient when a meal needs to 'wait' for late comers. They are just right for a crisp cool day when you want to be out of the house. An oven meal is made up of a main dish, a vegetable and a hot bread or dessert, baked at the same temperature for about the same length of time. Add something crisp and something cold from the refrigerator and your meal can be palatable and well balanced.

It is fortunate that puddings, muffins, fruits and many vegetables need the same moderate temperature as do most meat dishes. There is usually steam in the oven when these foods are baked, so do not bake delicate cakes and pastry with oven meals. Leafy vegetables that require short time cooking are rarely cooked in the oven. By cutting foods in large or small pieces you can vary the length of time needed for cooking.

### THE COMPANY DINNER

Hospitality is an important part of living. To prepare and serve a meal to guests will help you to be poised and grown-up. If you entertain with grace and ease you will need to do some careful planning ahead of time. A good company meal is a good family meal plus one dish that is outstanding—one dish that says I made this because you were coming.

You choose food you can do well and that requires little last minute preparation. The meal will probably go better if you write out your menu and put down the order in which you will prepare the different dishes.

You'll like arranging the table decorations, getting out the best linen, china and silver. The guests will probably enjoy the meal if you do.

### BUFFET MEALS

For this type of meal the food is arranged along the side of the dining room table or buffet. Two people sit at opposite ends of the table and serve the main dish and the beverage. Guests pass around to the left and with their right hand help themselves to the other dishes. All the food should be of a type easy to serve and easy to eat. Avoid foods that can't be eaten with a fork. Butter the rolls. Choose large plates, and meat that requires no cutting. The dessert is usually carried to the guests or it may be served at the dining table after the main course is cleared away.

Refreshments for a large party are often served buffet style. Usually each person serves himself. Girls would precede their partners down the line. Each boy could fill 2 plates—one for his girl and one for himself. If coffee, punch or other food is served all during the evening, the boys will see that the girls' cups or glasses are replenished.

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UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE AND THE UNITED  
STATES DEPARTMENT OF AGRICULTURE COOPERATING

J. W. BURCH, Director, Agricultural Extension Service  
Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914

**4-H RECORD**  
**Food Preparation V**  
**(To be used with 4-H Club Circular 129)**

Name \_\_\_\_\_ Age \_\_\_\_\_

Address \_\_\_\_\_ County \_\_\_\_\_

Name of 4-H Club \_\_\_\_\_

Name of Club Leader \_\_\_\_\_

Project Leader \_\_\_\_\_

Jr. Project Chairman \_\_\_\_\_

**CLUB & PROJECT ACTIVITIES**

Club Meeting attended during year \_\_\_\_\_ Project meetings held \_\_\_\_\_

Number attended \_\_\_\_\_

Number of dishes prepared in project \_\_\_\_\_ Number of meals prepared \_\_\_\_\_

Number of Food Preparation demonstrations given at:

Club meetings \_\_\_\_\_, Project meetings \_\_\_\_\_, County meetings \_\_\_\_\_,  
District meetings \_\_\_\_\_, State meeting \_\_\_\_\_.

Number of times participated in Judging work in:

Project meeting \_\_\_\_\_, County \_\_\_\_\_, District \_\_\_\_\_, State \_\_\_\_\_, Interstate \_\_\_\_\_.

Number of exhibits made in:

Community \_\_\_\_\_, County \_\_\_\_\_, District \_\_\_\_\_, State \_\_\_\_\_, Interstate \_\_\_\_\_.

Participated in:

County Achievement \_\_\_\_\_, District Achievement \_\_\_\_\_, State Achievement \_\_\_\_\_,  
National Contests \_\_\_\_\_, County Fair or Show \_\_\_\_\_, District Fair \_\_\_\_\_,  
State Fair \_\_\_\_\_, Interstate Show \_\_\_\_\_, County Camp \_\_\_\_\_, State Camp \_\_\_\_\_,  
National Camp \_\_\_\_\_, National Club Congress \_\_\_\_\_, News stories  
published \_\_\_\_\_, Radio programs participated in \_\_\_\_\_.

Served on \_\_\_\_\_ Standing Committee.

4-H Activity selected by club for this year \_\_\_\_\_

Brief statement of club achievements in club activity, health and recreation \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## THINGS TO DO IN THIS PROJECT

1. Plan, prepare and serve two dishes or more from:

Oven	Freezer	Deep fat frying	Yeast bread
Broiler	Mixes	Desserts	Outdoor meals
2. Plan, prepare, and serve the family meals for at least three days.
3. Help plan, buy, prepare and serve food for one special occasion, which includes boys and girls, such as a picnic, 'cook-out,' buffet meal, refreshments for a community affair.
4. Use a pressure saucepan and mixer, if available, to prepare some food for the family.
5. Use a thermometer when preparing a food for the family.
6. Visit one or more of the following as a group:  
A bakery, a food market  
A poultry, cheese or other processing plant  
A household equipment and china department of a large store.

## THINGS I DID IN THIS PROJECT

1. Name the two dishes you prepared from each of the following groups:

Oven	Freezer	Deep fat frying	Yeast bread
1.	1.	1.	1.
2.	2.	2.	2.

Broiler	Mixes	Desserts	Outdoor cooking
1.	1.	1.	1.
2.	2.	2.	2.
2. How many times did you make a yeast bread product during the year? \_\_\_\_\_
3. Did you plan, prepare and serve the family meals for at least three days? List the menus you served one day:

Breakfast	Lunch	Supper
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4. On what special occasion did you help plan, buy and serve food?  
1.  
2.
5. Did you use a pressure saucepan to prepare some food for the family? \_\_\_\_\_  
A mixer? \_\_\_\_\_ A thermometer? \_\_\_\_\_
6. Did your project group go on a tour? Where:
7. How many dishes did you prepare during the year? (Those required on the project plus other dishes) \_\_\_\_\_
8. How many meals did you prepare? (Those required on the project plus other meals) \_\_\_\_\_