





# Suggestive Outline of Work on Food Conservation

FOR

## Home Economics Teachers

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Prepared by

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State Teachers' Association  
to cooperate with  
State Council of Defense

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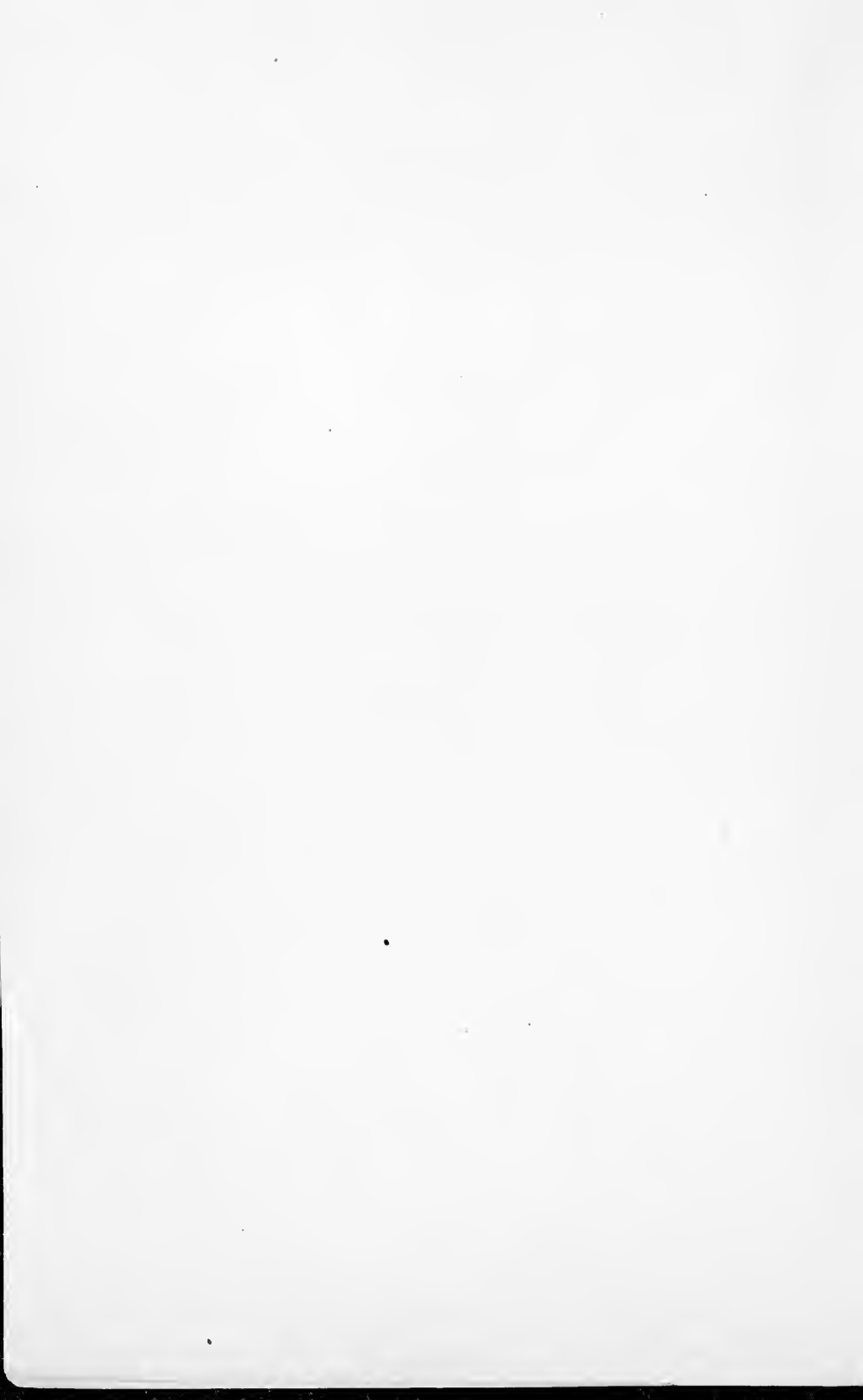
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# CONTENTS

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	PAGE
The President's Call.....	5
Preface .....	6
Home Card .....	6
Responsibility of Home Economics Teachers.....	8
Home Credit.....	8
References—books, bulletins, etc.....	10
Suggestive outline of work on food conservation:	
Introduction .....	7
Plan of procedure.....	11
Sugar conservation.....	11
Wheat conservation.....	13
Meat conservation.....	16
Milk conservation.....	18
Fats conservation .....	19
Vegetables .....	19
Eggs .....	20
Preservation .....	21



## THE PRESIDENT'S CALL TO THE WOMEN OF THE NATION

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MY DEAR MR. HOOVER: It seems to me that the inauguration of that portion of the plan for Food Administration which contemplates a national mobilization of the great voluntary forces of the country which are ready to work toward saving food and eliminating waste admits of no further delay.

The approaching harvesting, the immediate necessity for wise use and saving, not only in food, but in all other expenditures, the many undirected and overlapping efforts being made toward this end, all press for national direction and inspiration.

The women of the nation are already earnestly seeking to do their part in this our greatest struggle for the maintenance of our national ideals, and in no direction can they so greatly assist as by enlisting in the service of the Food Administration and cheerfully accepting its direction and advice. By so doing they will increase the surplus of food available for our own army and for export to the Allies. To provide adequate supplies for the coming year is of absolutely vital importance to the conduct of the war, and without a very conscientious elimination of waste and very strict economy in our food consumption, we cannot hope to fulfill this primary duty.

I trust, therefore, that the women of the country will not only respond to your appeal, and accept the pledge to the food administration which you are proposing, but that all men also who are engaged in the personal distribution of foods will cooperate with the same earnestness and in the same spirit. I give you full authority to undertake any steps necessary for the proper organization and stimulation of their efforts.

Cordially and sincerely yours,

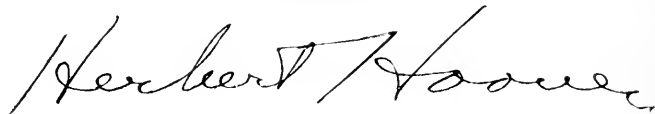
Mr. Herbert C. Hoover,  
Washington, D. C.  
June 12, 1917.

WOODROW WILSON.

## HOOVER'S LETTER TO THE BOYS AND GIRLS.

TO THE GIRLS IN THE PUBLIC SCHOOLS, GREETINGS:

To you as representing 23 million school children, the Food Administration is looking for the most direct help in carrying the message that "FOOD WILL HELP TO WIN THE WAR" back into your own families and make it a living force, a daily call to arms. You are our youngest army. We need you! Mobilize at once for Home Conservation Work!



## War Service in the Home

### THE PLEDGE

#### PLEDGE CARD FOR UNITED STATES FOOD ADMINISTRATION

IF YOU HAVE ALREADY SIGNED, PASS THIS ON  
TO A FRIEND

*To the Food Administrator:*

I am glad to join you in the service of food conservation for our nation and I hereby accept membership in the United States Food Administration, pledging myself to carry out the directions and advice of the Food Administrator in my home, in so far as my circumstances permit.

Name -----

Street -----

City ----- State -----

There are no fees or dues to be paid. The Food Administration wishes to have as members all of those actually handling food in the home.

Anyone may have the Home Card of Instruction, but only those signing pledges are entitled to Membership Window Card, which will be delivered upon receipt of the signed pledge.



## **SUGGESTIVE OUTLINE OF WORK ON FOOD CONSERVATION**

### INTRODUCTION

This outline of work has been prepared with the hope that it may be of help to Home Economics teachers in modifying their courses of study and in basing the work upon Food Conservation. It may be adapted to grade or high school work.

The sequence of lessons may be changed as the teacher sees advisable. For example—it is not intended that the study of winter vegetables be postponed until the spring vegetables are in market. Winter vegetables should be studied in season, these vegetables are to be used in the homes. It will be necessary for the teacher to study the outline carefully and arrange the work as the changing food conditions demand. The prices of some of the substitutes make these foods prohibitive in some localities; for example, honey and maple sugar as sugar substitutes. For this reason, the teacher, knowing her community, must exercise her own judgment in selecting the foods to be prepared; the dishes mentioned are suggestive only. Many of these recipes are to be found in any good text or cook book; others are given in the Government and University bulletins listed.

The educational value of the subject is not to be sacrificed, but must be emphasized in every possible way. Experimental work, study, outside reading, stimulating discussions, trips to places of interest, are all part of the course and should share time with the practical work in the selection, preparation and serving of foods, in the practical household work, etc.

Emphasis is to be placed upon food study and exchange value of foods.

Emphasis is also to be placed upon economy in use of all food materials and utilization of left-overs. Study costs and comparative food values.

## RESPONSIBILITY OF HOME ECONOMICS TEACHERS

### TO TEACHERS:

Our government is depending upon its 23 million school children to help win the war. The inspiration and direction of the Home Economics teachers will in a larger measure determine the extent of this patriotic service. Never before have we had so important and tremendous a responsibility. The time has come when we can prove the value of the study of Home Economics.

#### *To do this:*

1. We must acquaint ourselves with the facts regarding the food situation by reading the government bulletins as they are published, by reading the best magazines and by keeping ourselves informed regarding the federal, state and local food regulations.

2. We must make the work extremely practical and must plan it to fit the needs of the community. *The work must be such that it will function in the daily lives of the pupils.*

3. We must make the Home Economics department in the school and community and must cooperate with:

1. English department and debating societies

See Bulletin ———

(Devise means of getting recipes of tried war dishes into homes of those pupils not taking Home Economics.)

2. Art department in poster work

In planning exhibits for schools and stores illustrating different phases of food conservation.

Few examples:

exhibit urging use of meat extenders, exhibit urging use of sugar substitutes, exhibit urging use of bread substitutes, exhibit urging use of less fat, exhibit urging use of wheat substitutes.

3. Mathematics department

The following book will prove helpful and suggestive—"Problems on Food" by A. N. Farmer & Janet Rankin Huntington.

4. Local member of Council of Defense.

5. Social committees

6. Church societies

7. School cafeteria

} in planning war time meals.

## HOME CREDIT

Our country must have the cooperation of every man, woman and child if it is to solve the food problem successfully. Many homes can be reached only through the children. To secure this cooperation it is advisable that credit be given for home work. The following scheme is suggestive only, and can be improved upon by individual teachers.

Home work should be planned at school and results judged at home and samples in lunches shown to teacher.

- Liberty breads.....yeast and quick (5 times)
- Meat substitutes ..... (3 times)
- Meat extenders or stretchers..... (3 times)
- Pastry made with barley flour, rye flour..... (3 times)
- Cakes and cookies which save wheat and sugar..... (1 time )
- Cakes and cookies which save butter fats..... (1 time )
- Cakes and cookies which save all fats..... (1 time )
- Menus of meals planned and prepared by girl: 1. Wheatless breakfast; 2. Wheatless supper; 3. Meatless dinner; 4. Meatless supper.

Suggestive report card:

.....Has Done Well The Following Work: Name of pupil		
COOKING		
Food Prepared	Number of Times	Remarks
.....	.....	.....
.....	.....	.....
.....	.....	.....
Signed..... Parent or guardian		

*Credit for Summer Work*

1. Preservation of fruits and vegetables.
2. Jelly.

Food	Number of Quarts	Cost	Results

3. Preparing of one meal alone daily for two months
4. Preparing war breads alone for two months.
5. Caring for vegetable garden with six or more vegetables.

Communicate with Miss Elizabeth Amery, State Leader of Girls' Clubs Agricultural College, University of Wisconsin, Madison, Wis., regarding club work for girls during the summer.

## REFERENCES

New material is constantly being prepared by the U. S. Food Administration and by the State Universities. Place your name on the following mailing lists:

State Council of Defense State Capitol, Madison.  
States Relation Service U. S. Department of Agriculture, Office of Home Economics Department.  
Department of Interior Bureau of Education, Office of Home Economics Department.  
Agricultural College, University of Wisconsin, Madison.

*Send for the following:*

When placing name upon above mailing lists ask that bulletins and leaflets already out be sent you. Among these should be the following, all of which may be secured through the United States Food Administration, Wisconsin Division, State Capitol, Madison, Wisconsin.

"Ten Lessons on Food Conservation"  
"War Economy in Foods"  
"War Cook Book for American Women"  
Bulletin No. 1  
Bulletin No. 2  
"The Present Campaign" Bulletin No. 7  
"Graphic Exhibits on Food Conservation"  
"Commodity Licensing"  
"A Few Food Problems"  
"Creation of United States Food Administration."

United States Department of Agriculture, Washington, D. C.

"Wastes—The Leaks in a Nation's Strength"  
Food Thrift Series. Nos. 1 to 8  
"Care of Food in the Home"  
"How to Select Foods," I, II, III  
"Food for Young Children"  
"Economical Use of Meat in the Home"  
"Use of Milk as Food"  
"Corn Meal as a Food and Ways of Using It"  
"Use of Fruit as Food."

Note: List of Farmers' Bulletins is given in "Ten Lessons on Food Conservation."

*Additional References:*

**Bulletins:** College of Industrial Arts, Denton, Texas. "The Peanut and Its Uses"  
**Books:** "The Food Problem" by Kellogg and Taylor. (Macmillan)  
**Magazines:** "Journal of Home Economics," American Home Economics Association, Baltimore, Md. (\$2.00 per year)  
**Libraries:** Watch the library bulletin boards for Food News Notes for Public Libraries.  
**Posters:** United States Food Administration, Wisconsin Division State Capitol, Madison, Wis.

## PLAN OF PROCEDURE

- I. General discussion of present conflict and situation.
- II. General working scheme—(Elastic) to be followed in study of conservation of wheat—meat—sugar—fats—and fuel.
  1. General statement regarding food supply:
    - World supply; United States supply; General habits of consumption in United States.
    - United States obligation in conservation of wheat—meat—fat—sugar—fuel; Amount? How?
    - Organization and Plan of the Food Administration.
      - Federal,—State,—Local.
  2. General outline to be followed so far as possible in the study of each food material used:
    - Production; Preparation for market and cost of transportation; Selection (marketing); Structure; Composition (Simple food tests are of interest to pupils:—Starch, protein, etc.); Nutritive value; Digestibility; Place in the diet.
    - Cost—Comparative costs and nutritive values; Care of. Preparation; Preparation for cooking; Effect of heat upon; Cooking or preparation for serving.
    - Serving—When?—How?—With What Other Foods?
    - Finished Product: Quality; Palatability; Number of servings—Caloric value of serving.
    - Cost: Materials; Fuel; Labor; Time.
    - Compare homemade with commercial products as to:
      - Cost; Palatability; Quality.
    - Food laws and regulations.
    - Cold Storage.
  3. Bulletin: will suggest topics for discussion, reports and themes. "Problems on Food", by A. N. Farmer and Janet Rankin Huntington will suggest arithmetical problems of value and interest.

## SUGAR CONSERVATION

### SUGAR SITUATION

#### Cane Sugar—

- World production.
- Cultivation and manufacture.
- Chief producing areas.
- Exporting countries.

Beet Sugar—

Development of beet sugar industry.

World production.

Chief producing areas.

Exporting countries.

Sugar consumption in the United States—

Obligation of United States in conservation of sugar.

Obligation of individual in conservation of sugar.

How much?

How reduce consumption and why?

Value of sugar in diet—

What is an adequate amount of sugar per individual per day?

Harm in use of excess of sugar.

Have pupils measure sugar they use per week and report.

Make list of ways in which sugar is wasted.

Make list of foods which will satisfy the craving for sweets;  
foods not containing cane or beet sugar.

Conserve sugar throughout the course by:—

Substituting honey, corn syrup, molasses, fruit juices in baking  
and cooking; on breakfast cereals and in making confections.

Substituting fresh and dried fruits.

Utilizing sugared jelly in puddings and in ices.

Reducing the amount of sugar in cakes, pies, canned fruits, etc.

Reducing consumption of candy, ice cream, sweet drinks.

Prepare—

(Thanksgiving lesson).

Grape Ice—

Utilize glasses of jelly which has sugared. Dissolve in boiling  
water. Dilute to taste. Freeze.

Ice Cream—

Prepare custard—sweeten with corn syrup, flavor with car-  
amel. Freeze.

(Christmas lesson).

Pop corn balls (Corn syrup and molasses).

Honey candies (Depends upon locality and cost).

Corn syrup and molasses taffy.

*Fruits:* (Fresh and dried)

Study according to outline—

Emphasize value of fruits in diet.

Compare fresh and dried as to nutritive value and cost.

Prepare fresh fruits for breakfast; for desserts.

Prepare dried fruits (This may be done in connection with cereal  
lessons).

## WHEAT CONSERVATION

### WORLD'S SUPPLY—

#### United States supply—

- General habit of consumption in United States;
- United States obligation in conservation of wheat;
- Individual obligation in conservation of wheat; How much?  
(Keep in touch with State Food Administration or Magnus Swenson). How cut down wheat consumption?

### *Thickening Agents Used in Sauces, Soups, Gravies, etc.*

Thickening agents which may be substituted for wheat flour:

Flours other than wheat; Cereals; Waters in which rice, macaroni, tapioca, etc., have been cooked. Eggs; Gelatin.

Compare thickening power of:

Wheat flour; Barley flour; Potato flour; Corn meal; Corn flour;  
Rye flour; Browned wheat flour.

Compare the above as to:

Time required in cooking; Flavor; Quality of finished product.

Prepare dishes containing white sauces: (Use butter substitutes and no wheat flour).

Creamed soup (thin sauce). Creamed vegetables (medium sauce).

Creamed fish (medium sauce). Croquettes (potato and fish: rice and fish. Thick sauce. Do not fry croquettes, brown in oven.) Utilize rice water in tomato soup or in tomato sauce to be served with croquettes.

### *Breakfast Cereals*

Grains used in breakfast foods:

Compare composition of the following cereal grains: Wheat; Corn;  
Rye; Rice; Oats; Barley.

Make list of breakfast foods on market that are wheat products.

Make list of breakfast foods on market that are made of cereals other than wheat.

Study variety of breakfast foods: (ready to eat,—partially cooked, —not cooked) in the local market and compare as to: Preparation for market; Principles of cooking; Quantity in 100-calorie portions; Number of servings in package or pound; Cost; Care of; etc., (*See study outline—Page 11*).

Conservation of sugar—

On breakfast cereals.

Substitute for sugar: Stewed prunes; Dried figs; Raisins;  
Dates; Fruits—Canned and fresh; Corn syrup; Molasses.

Conservation of fat—

On breakfast foods.

Substitute for cream: Fruit juices; Top milk.

Conservation of fuel—

Fireless Cooker; **Homemade** cooker.

Use in cooking of cereals. Compare with cereals cooked in double boiler.

Prepare: (No wheat breakfast foods.)

Cream of Rye (Serve with banana and top milk.)

Cream of Rice (Serve with stewed prunes and prune juice.)

Cornmeal (Serve with corn syrup and top milk.)

Pearled Barley (Serve with dates and top milk.)

Oatmeal (Serve with stewed apricots and apricot juice.)

Utilization of left over cereal:

Saute in drippings or vegetable fats; Griddle cakes (Serve with jelly or corn syrup); Muffins or yeast breads (Serve with corn syrup or molasses); Soups; Puddings; Combined with meat in casserole.

Prepare:

Corn meal pudding; Barley soup.

*Desserts:*

Starchy food materials which may be substituted for desserts containing a high percentage of wheat flour, such as cakes, pies.

Study according to outline: Tapioca, Sago, Rice, Cornmeal, Cornstarch.

Prepare and study according to outline: (Use sugar substitutes in puddings and pudding sauces.)

Apple tapioca, custard tapioca, rice pudding, chocolate cornstarch pudding, carrot and plum pudding.

*Batter and Doughs:*

Study and compare the following as to composition, food value, gluten content, cost, production, preparation for market and keeping qualities:

Wheat flour, Rye flour, Corn flour, Barley flour, Potato flour, Buckwheat flour, Corn meal.

Percentage of wheat used in making flour:

White flour, Whole wheat flour, Graham flour, Home ground flour.

Make lists of flour and paste products which should not be used, as macaroni, pancake flours, ice cream cones, pattie shells.

Uses and study of various fats on market in preparation of quick breads. Lessons on fats may be given before beginning work on batters and doughs.

Reduce amount of sugar in recipes and substitute corn syrup, honey, molasses.

*Quick Breads:*

Study lightening agents used in quick breads.

Experiments performed to illustrate the action of leavening agents.



Air—Incorporated by beating; Incorporated by addition of beaten eggs.—Steam.—Chemical.—Carbon dioxide introduced by means of

1. Yeast in fermented breads.
2. Alkali and acid. Soda and sour milk, soda and molasses, soda and cream of tartar, soda and alum, soda and phosphoric acid.

Composition of baking powders; Classify baking powders according to acid content; Read labels on commercial brands and classify these baking powders. Compare as to cost and action.

Homemade baking powder; Compare homemade and commercial as to composition, keeping quality, cost, etc.

Substitute soda and sour milk for sweet milk and soda in breads made.

Emphasize utilization of sour milk in baking.

Prepare: (Pour Batters), Buckwheat griddle cakes, Potato griddle cakes, Left over cereal, Barley and baking powder cakes, Corn flour and egg and baking powder cakes.

Prepare: (Drop Batters)—Rye and wheat muffins, Corn meal muffins, Potato (cooked) muffins, Barley muffins, Wisconsin Johnny cake, Southern pone.

Prepare: (Soft Doughs)—Baking powder biscuits—using barley or rye with or without wheat flour, Potato (cooked) baking powder biscuit for meat pie. (Same as baking powder biscuits, potato being substituted for  $\frac{1}{2}$  the flour.) Corn meal crisps, Corn meal Parker House rolls.

Prepare: Potato cake, Carrot cake, Corn flour cakes, Squash cakes, Oatmeal cookies.

Prepare: Pumpkin pie—cornmeal crust, Raisin pie—barley or wheat crust. Shall we serve pies?

### *Yeast Breads:*

Good bread is not a matter of luck. The principles involved in the use and action of yeast, in the manipulation of materials and in the baking, must be understood and applied if a uniformly good product is to result. Very careful planning and preparation is necessary to make the bread lessons so successful that pupils will have a very practical working knowledge.

To encourage baking of bread at home plan contest, awarding prizes.

### YEASTS:

1. Microscopic study of yeast plants.
2. Experiments. (a) to determine the temperature best suited for the growth of yeast; (b) to determine the food requirements of yeast; (c) showing rate of growth of dried, compressed and liquid yeast.
3. Make liquid yeast.

4. Study of kinds of yeast, growth, action manufacture, characteristics, costs, advantages and disadvantages of each.
- Application of principles deduced from experiments in the making of breads, long and short processes.
- Prepare: Potato bread, Oatmeal bread, Rye bread, Barley bread, Peanut bread, Cornmeal bread, Parker House rolls, Coffee cake.
- Score and compare finished products with commercial product as to cost, palatability, and quality.
- To show the relation between Parker House rolls, coffee cake and bread, it is well to start with a straight bread sponge and modify this as necessary to secure the desired product.

*Care and Utilization of Stale Bread:*

Throughout the course the teacher should vary the methods of conducting discussions of study and laboratory periods. Try out new schemes and devices to keep the work from becoming monotonous. For example, make the lesson on utilization of dry bread a practical test of pupil's initiative, independence, and ability. Have each girl bring for approval on the day previous to the laboratory lesson a recipe for left over bread. Have pupils understand that the lesson is in the nature of a practical test and that each is to be judged as to: (1) Personal appearance; (2) Organization of work; (3) Technique; (4) Speed; (5) Finished product and serving.

As in other laboratory lessons have finished products brought to table. Discuss and compare results. The teacher, as well as pupils, will be surprised at the variety of attractive and palatable dishes.

*Wheatless Meals:*

- (1) Study "menu building"; (2) Plan meals for wheatless days;
- (3) Plan, prepare and serve a wheatless breakfast and luncheon.

## MEAT CONSERVATION

- (1) World's supply; (2) U. S. supply; (3) General habits of consumption in U. S.; (4) U. S. obligation in conservation of meat; (5) Individual obligation in conservation of meat.
- (a) How much to be conserved; (b) How cut down meat consumption.

*Meat:*

Sources of meat supply, Present problem.

Make lists of meat and meat products which should not be used on meatless days and at meatless meals; Make list of meat substitutes; Compare meats and meat substitutes as to cost and nutrition value; Harmful effects of too large quantities of meat in diet; Place of meat in diet of young, of adults; Visit meat market and if possible a packing plant.

Study meat according to outline page.

Study cuts as to position in animal, tenderness, cost, etc.

Have all trimmings, fat, bones, etc., sent with meat. Try out fat, use bones in meat stock.

Use those parts of animals that are not shipped—sweet breads, liver, heart, pigs feet, etc.

Work on meats should include:

Microscopic study of structure of muscle fibre

Experiments showing effect of salt on muscle fibre

Experiments showing effect of acid on muscle fibre

Experiments showing effect of grinding on muscle fibre

Experiments showing effect of pounding on muscle fibre

Experiments showing effect of dry heat on muscle fibre

Experiments showing effect of moisture and heat on muscle fibre.

Experiments showing principles underlying the preparation and cooking of meat:

1. Retain all juices

a. As in steaks, roasts, chops, meat balls, etc.

b. By exposing to high temperature (dry heat)

c. Best for tender cuts

May also be used for tough cuts made tender by grinding—  
as in meat loaf, meat balls.

2. Extract all juices

a. As in soups, meat broths, etc.

b. By allowing meat to stand for some time in cold salted water

c. By grinding meat and heating in double boiler

d. Use tough cuts

3. Combination of 1 and 2

a. As in stews, pot roasts

b. By searing, then adding water, (may be vegetable water)  
and simmering until tender

c. Used in preparation of tough cuts

4. Tough meats made tender by

a. Grinding (apply heat as in 1)

b. Pounding and flour (not wheat)

c. Use of acid (apply heat as in 1 or 3)

Prepare: Steak (class work); Soup; Casserole of rice and meat (utilize soup meat); Stew (mutton); Three meat extenders, (dishes in which small amounts of meat are combined with cereals and vegetables).

*Meat Substitutes:*

**POULTRY:**

Fowl used for human food; Compare with meat as to nutritive value and cost; Study according to outline; Demonstrate the dressing of chicken; Try out and clarify chicken fat—utilize in cooking.

Prepare: Baked chicken; Chicken pie; Utilize left over chicken using one crust of potato baking powder mixture; Use chicken fat in crust.

*Fish:*

Make list of fresh fish and compare as to prices: Fish within state waters; Fish shipped in; Fish in local markets; Make list of shell fish, of cured and canned fish in local market. Compare prices.

Compare fish with meat as to structure, composition, cookery, cost and use in diet.

Prepare: (1) Fresh fish (Demonstrate dressing); Baked; Fish (left-over) escalloped in white or tomato sauce; Fish chowder; (2) Salt fish: Codfish balls (saute in drippings); Broiled salt mackerel; (3) Canned fish; Salmon loaf.

## MILK

Milk situation in countries of Allies.

Milk situation in United States: Causes of present situation; Proposed plans to better situation; How can individuals aid in solving the problem?

Study milk according to outline: (Page 11.) Compare whole and skimmed milk as to food value and cost; Emphasis upon food value; Emphasis upon the amount of milk in diet of children; Plan exhibit showing that even at present price milk is the cheapest food we can buy; Emphasis upon production under sanitary conditions, care of milk in the home.

Study state laws pertaining to milk production: Visit dairy, if possible; Emphasize use of skim milk, sour milk and whey in cooking; Study manufacture and value of condensed milk, malted milk, milk powders.

*Sour Milk:*

Prepare: Cottage cheese. This gives an excellent opportunity of studying the causes of souring, the changes produced, the composition of the milk, effect of heat, etc.

Compare buttermilk and sour milk as to food value and place in diet. Compare sweet milk and sour milk as to food value and place in diet.

Composition of the whey; Composition of the curd.

Compare 1 lb. of cottage cheese as to protein content—energy supplied and cost, with: round steak, hind leg of lamb, chuck rib beef, smoked ham, breast of veal, sirloin steak.

Prepare: Clabber; Cottage cheese pie; Cottage cheese salad.

Make list of dishes in which cottage cheese may be used.

Make list of dishes in which sour milk, buttermilk and whey may be used.

*Sweet Milk:*

Pasteurize milk.

Prepare baby's bottles for one day (Class demonstration)

Prepare: Junket, Milk toast and dishes for invalid; Milk drink.

*Cheese:*

Study cheese according to outline.

Make list of cheese in local market—compare as to price.

Weigh out 100 calorie portions of cheese and other protein foods.

Compare as to price and as to character of protein present.

Compare as to fat content.

Prepare: Welsh rarebit; Rice, cheese and tomato casserole (one-dish meal); Cheese and nut casserole; Cheese sauce on vegetables (cabbage, cauliflower).

### FAT CONSERVATION

Fat Situation: Why fats are doubly precious; Consumption of fat in the United States; Responsibility of United States in conserving fats; Responsibility of individuals in conserving fats; How much; In what ways?

What constitutes an adequate amount of fat per day, per individual? Have pupils record of dishes which supplied the fat in meals for one week, stating kind of fat and so far as possible amount.

Work outlined on fats should continue throughout the course.

Meat lessons present opportunity to try out and clarify fats. Save all drippings.

Butter substitutes, lard substitutes, vegetable oils and drippings should be used in baking and cooking throughout the course.

Composition of fats. Make list of foods rich in fats and arrange in classes; 100 per cent fat—80 per cent to 100 per cent fat; 40 per cent to 70 per cent fat—20 per cent to 40 per cent fat.

*Fats used in Laboratory and in Home:*

Make table as work progresses, showing

Kinds	Flavor	Uses	Cost
-------	--------	------	------

Prepare:

Salad dressings, using various salad oils on market (fill out table above); Cabbage and cheese salad; Potato salad; Carrot and peas salad; Fresh, green vegetable salads should be prepared in Spring; Dandelion; Water Cress; Combination spring vegetables.

Place of salads in diet; Plan luncheon and dinner menus, including salads; Make butter (class demonstration).

Food value as compared with butter substitutes.

Importance of butter in children's diet.

Amount of butter per day per child, per adult.

*Soap:*

If the instructor has exercised great care there will be no fats left for soap making. Do not advocate the buying of fat for soap making. This is not economy. If fat, not fit for human consumption, can be obtained from hotels or cafeterias give two lessons on soap making. Make soap in laboratory. Compare with commercial soaps. Teach economy in use of soap. Save all small pieces and demonstrate the heating and forming into large cake.

## VEGETABLES

The government urges its people to eat plenty of vegetables. Why? The 1917 potato crop of the United States; of Wisconsin?

Amount of potatoes to be used before next crop is harvested. (36,000,000 bushels)?

Study vegetables according to outline; Emphasis upon value of vegetables in the diet.

Classify: Rich in mineral; Rich in starch; Rich in protein.

Compare 1 lb. of potatoes with 1 lb. bread as to nutritive value and cost. Compare other starchy vegetables with bread.

Work on vegetables shall include: Microscopic study of structure of starch grains; raw, partially cooked, thoroughly cooked. Experiments showing effect of dry and moist heat upon starch and cellulose. Experiments showing digestion of raw, partially and thoroughly cooked starch. Experiments to illustrate the principles underlying the preparation for and the cookery of vegetables.

Emphasis upon those methods of cooking whereby there is little or no loss of nutrients.

Utilization of water in which vegetables have been cooked, in gravies, soups, and meat and vegetable sauces. Do not throw away the liquor in canned vegetables, by so doing valuable mineral water is lost.

Prepare: Potatoes as vegetables (4 or 5 different ways); Potatoes as wheat conserver (3 or 4 different ways); Potatoes as meat extender (3 or 4 different ways).

Prepare: Winter vegetables; Onions; Cabbage; Carrots; Turnips; Beets; Canned and Dried Vegetables.

Spring Vegetable (in season); Greens; Dandelions; Peas, etc.

## LEGUMES

Study according to outline as far as possible: Peas; Beans—navy—soy; Lentils; Peanuts (complete protein); Soy (complete protein).

Compare with meat and other protein foods as to cost, digestibility, nutritive value, place in diet. Compare the efficiency of proteins found in legumes with that found in meats, eggs, milk, cheese.

Make lists of dishes in which legumes are combined with other food materials containing complete proteins.

Prepare: Creamed soups; Dried peas or lentils; Peanuts; Cheese or bean roast. (Serve with horseradish or tomato sauce); Peanut butter chops; Soy Beans (Boston baked—use of fireless cooker); Study menus for meatless days and meatless meals.

Plan, prepare and serve a meatless luncheon.

Plan, prepare and serve a meatless dinner.

## EGGS

Study eggs either in spring or early fall when eggs are comparatively cheap. Advisable to do this work in spring so that children may preserve eggs at home during the summer.

Study eggs according to outline. Stress the food value of eggs; muscle "building stones".

Compare with other protein foods as to nutritive value, place in diet, cost; eggs as meat substitutes.

Work on eggs should include experiments showing:

Coagulation temperatures; Effect of high temperature; Action of acids; Presence of sulphur; Methods of testing eggs for freshness; Signs of good egg.

Preserve eggs in water glass:

(Circular 74—Preserve Eggs for Winter Uses—Univ. of Wis.)

Composition of water glass; Causes of spoiling eggs.

Methods of preserving eggs, underlying principles, advantage and disadvantages of each method.

Selection of eggs for preservation; Test for freshness (Make homemade candler); Preparation for preserving; Preserving; Care of.

Precautions in using eggs preserved in water glass.

Prepare:

Eggs out of shell: Poached; Scrambled—Beat eggs slightly and add milk and seasoning same as for scrambled eggs—cook in double boiler without stirring; Baked.

Eggs in shell:

Hard cooked  
Soft cooked  
Hard boiled

} Below boiling point.

Utilize eggs in variety of ways, even the soft cooked eggs may be utilized.

Eggs as thickening agents: Baked custard; Soft custard; Rice pudding (Cooked rice plus raisins and flavoring and soft custard).

Cooked salad dressing (utilize in salad or sandwiches).

Eggs as lightening agents: French omelet; Foamy omelet; Cheese Fondue; Bread and Cheese Souflee; Prune Whip; Sponge cake (no wheat flour).

Make list of egg dishes which may be used as meat substitutes.

## HOME GARDENS

Effort should again be made during the vacation this year to encourage children to help with home gardens as well as with school garden. The school garden may be taken care of by a few pupils, who may in this way secure school credit for work. Interested citizens will gladly cooperate and supervise these children.

In the Fall there may be given the lessons on gathering and storing winter vegetables and in canning vegetables and fruits. If storage facilities of school are not good for vegetables, some nearby public spirited citizen may be glad to offer storage room in his cellar.

## GREATER PRODUCTION AND CONSERVATION

*Home Gardens:*

Effort should again be made during the vacation this year to encourage children to help with home gardens as well as with school garden. The school garden may be taken care of by a few pupils, who may in this way secure school credit for work. Interested citizens will gladly cooperate and supervise these children.

In the fall there may be given the lessons on gathering and storing winter vegetables and in canning vegetables and fruits. If storage facilities of school are not good for vegetables, some nearby public spirited citizen may be glad to offer storage room in his cellar.

*Storing Vegetables for Winter Use:*

Production: Increased production; Why? Compare with production of previous years; Compare production in home garden with that of previous years; Individual reports of gardening during summer.



Conservation of vegetables. Why? Store vegetables; Can vegetables and fruits; Dry vegetables and fruits; List of vegetables in home gardens which are to be stored.

Storing of vegetables (Store vegetables of school gardens)

Where to store: House cellar; Outside cellar or caves.

Requirements of successful storage: Selection of vegetables; Temperature; Moisture; Ventilation.

Storage of Cabbage; Celery; Onions; Potatoes; Root crops; Squash and pumpkins.

*Preservation of Foods:*

Season's Production

Sugar problem

Housewives' responsibility in regard to home preservation

Causes of the spoiling of fruits and vegetables

Methods of preserving fruits and vegetables

Commercial

Home

*Drying Surplus Fruits and Vegetables:*

Bulletin 86—Agricultural College, University of Wisconsin.

Fruits and vegetables suitable for drying; Advantages in drying over other methods of preservation; Principles underlying preservation by drying.

Methods of drying:

Sun, Artificial heat, in oven or special drying apparatus; Air blast created by an electric fan; By combining any of the above methods.

General Rules for Drying

Dry vegetables and fruits in laboratory: Corn; Apples.

*Canning Fruits and Vegetables:*

Methods of canning fruits and vegetables.

Discussion as to advisability of canning carrots, radishes, etc.

What vegetables in home garden would it be practical to can?

Principles underlying the canning of fruits and vegetables.

Canning powder. Discussion of possible harmful effects, cost. Unnecessary.

Utensils which aid in canning.

Containers: Tin—Use—Glass (various makes); Rubbers—Tests for good rubbers.

Canners: Homemade; Commercial.

Cold-pack process: Method; Advantage of.

Open kettle process: Method; Compare with cold-pack as to time, labor, fuel, finished product, keeping quality, etc.

Syrups used: Thin; Medium thin; Medium thick; Thick.

Laboratory work: Can fruits and vegetables.

Storage: Compare with commercial products as to cost, appearance, flavor.

*Other Ways of Preserving:*

Discuss jams, marmalades, butters as to principles involved, utilization of bruised fruits, pulp of fruits left when making jelly.

Prepare: Apple jam, Apple butter, Carrot and orange marmalade, Grape marmalade.

Discuss spicing and pickling.

Prepare: Spiced crab apples, Pickle, etc.

*Making of Jelly:*

Characteristics of good jelly; Constituents in fruits, necessary in order that the jelly can be made.

Pectin test: Fruits suitable for jelly making; Utensils used in making jelly.

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