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AGRICULTURAL EXTENSION SERVICE  
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

HOME ECONOMICS  
FOODS AND NUTRITION  
Box 5097 ZIP 27607

December 5, 1967

TO: Home Economics Agents with Responsibility  
in Foods and Nutrition

FROM: Marjorie M. Donnelly *Marjorie Donnelly*

RE: Additional materials

These materials are to be added to your packet on Goals and Values. You will find the three items suggested for newsletters, a suggested television script, a "give away" for "I Remember Mama", and a lesson sheet plus give away on Simple Entertaining.

These materials may be used as they are or they may furnish you with ideas. Time, interests, nationality groups within your community, etc., may call for modification of any or all of these materials.

May we request your cooperation in letting us know how many "give aways" you will need as soon as possible. Some plans of work did not include this, and we want to be prepared to handle your requests as quickly and efficiently as possible.

MMD/mgc  
Encls.

CC: Dr. Eloise Cofer  
Miss Lorna Langley  
District Agents



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS, NORTH CAROLINA STATE UNIVERSITY AT RALEIGH, 100 COUNTIES AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING

## Suggested Newsletter Material

### "I'D RATHER FIGHT THAN SWITCH"

"I'd rather fight than switch!" Do you feel that way about your food habits? The well-known cigarette commercial is applicable to many of us and the way we feel about food.

Numerous reasons have been given for peoples' reluctance to change eating habits. Among them are ignorance, prejudice, cultural patterns, complacency, and poverty. Some of the basic reasons, however, are still not known.

We do know that food habits in the everyday life of most people are as significant as language and reading habits. People moving from one country to another usually accept the dress and language - perhaps even the religion - of a new country before they accept the food habits.

Eating is a very personal thing to most of us. Food habits can be considered one form of self-expression, just as clothing or politics. They carry with them a feeling of security.

Much of our unwillingness to change, or rigidity, seems to be associated with early childhood. Those who grow up in an atmosphere of tender loving care with food as a source of pleasure are as resistant to change as those who grow up with a feeling of anxiety or uncertainty with respect to food.

From studies done throughout the United States, we know that most people have food habits which can be improved. Most of us do not change until we have a reason for doing so. Improved eating may come with an awareness of the value of good health. They may be improved through the desire to help children form good habits.

Food habits are personal. Most of us guard them jealously. Let's be sure what we guard is worth it. Set yourself a goal of good health throughout life. Don't "fight the switch" to good food habits.

#### References:

Bogert, Briggs, Callaway - Nutrition & Physical Fitness, W. B. Saunders Co., 1966

Burgess & Dean - Malnutrition & Food Habits, MacMillan Co., 1962.

## Suggested Newsletter Material

### STATUS OR WASTE

Our values go with us to the grocery store. Here we must make many decisions that involve status or waste.

We have no quarrel with deliberate choices which are costly as long as the individual feels he can afford the choice and as long as nutritive needs of the family are met.

Our concern lies more in the area of the homemaker to whom it is so important to say "I always buy calves' liver" that she is willing to spend extra money and still not get an adequate amount of meat for her family's need. The homemaker who says "I can't afford grapefruit @ 2 for 29¢" but thinks nothing of purchasing a bottle of wine at \$2.29 may need to pause and think.

At times, the purchase of food items may point up a correlation between the desire for status and laziness. This is reflected in the number of ready prepared items which are bought on the "I can't be bothered" basis - items such as congealed salads, entrées, etc. Children's desires to be members of the so-called "in" group also lead us to make purchases which are for status purposes.

American homemakers are a group who do not mean to be a part of the practice of deliberate waste in the United States. We shudder at the term "planned obsolescence". Books such as The Status Seekers, The Hidden Persuaders, The Waste Makers all point up our weaknesses as consumers.

With our weaknesses in mind, we should do an honest analysis of our food purchasing habits. This done, we may then take realistic values with us to the grocery store.

## Suggested Newsletter Material

### PUT A NICKEL IN THE SLOT

The day of automation is here. Food has proved no exception to the rule. And, though it has been with us for some time, the process of putting a coin in a slot and getting food or beverage in return still intrigues many Americans.

Because not all foods lend themselves to automatic dispensing, a limited selection is usually offered. Noted anthropologists such as Margaret Mead point out that food dispensers may put restrictions on food intake rather than expanding choices.

Dr. Mead also points out that we may be drifting back toward price-meal eating similar to that done by primitive tribes. Our affluent society makes it possible for people to eat when and where they like. What continual practice of this will do to our family life remains to be seen.

Nutritionists are concerned about the quality of the food dispensed - especially as machines invade more industries and schools. There is no quarrel with them as dispensers of snack foods. One wonders, however, if there are enough good foods available in the right amounts to meet nutritive needs of school children and industrial workers.

Ask yourself whether the members of your family who rely, for the most part, on automatic food dispensers for part of their meals are getting full value for the money spent.

Are they eating from the automatic dispensers because they prefer it or because it is easier on you? Which means more - health or the easy way out? A careful assessment of values is important.

## Suggested Television Program

### COMMON NEEDS AND DIFFERENCES

OBJECTIVE: To help viewers understand that while we all have the need for certain nutrients, we do not have to eat the same food or in the same manner.

#### Visuals

(Flash pictures of Chinese, Mexican, etc., on screen)

(Use picture of food, food models, or real food)

(If not used above, use food here)

#### Script

Food means many things to many people. This is a statement we have heard time and time again, yet in spite of it, we frequently try to fit people into the same mold where eating is concerned.

The fact that many people in underdeveloped countries have preferred to starve, figuratively speaking, rather than accept unfamiliar foods shows us it is hard to change food habits, that food is a very personal thing.

Let's be more specific. All of us have heard it is important to eat breakfast. We know, too, that some good source of protein should be included in that breakfast - because it is essential for growth and repair of body tissue; experiments show it's well utilized if spread across the day, etc.

What does breakfast mean to you?

To you, it may mean orange juice, bacon and eggs, toast and coffee.

To an Englishman, it could be kippered herring and broiled tomatoes.

To a Dutchman, it could be bread and cheese, and possibly eggs.

To a Chinaman, it could be a rice porridge, salty dry soybeans or peanuts, and pickled vegetables.

Actually, we don't have to wander that far away. We find variations between regions of the United States and between age groups - perhaps you have some in your own home.

For example, a Southerner seldom thinks of serving codfish cakes for breakfast as New Englanders do. And, few grandparents enjoy the hamburgers their teenage grandchildren may prefer for breakfast but there is really nothing wrong with eating them.

(Over)

(Camera card -  
Common need is  
Protein)

Again, we point out that the  
Common need is some good quality protein.

(Camera card -  
Different Sources:  
eggs, cheese,  
meat & fish,  
beans, milk)

Whether that protein comes from eggs, cheese, soybeans,  
fish, or ground beef is not important.

We could go on and look at other nutrients, but I think  
this gives you the idea. (We are assuming, of course,  
the individual has enough food to eat.)

Yes, food is important to people. We should encourage  
people to express their personalities and cultural back-  
grounds through food. If food patterns are inadequate in  
nutrients, we can "add to" rather than change.

There was a song long ago, "It's Not What You Do But The  
Way That You Do It". In parody, with relation to food  
intake, remember "It's what you do, but not the way that  
you do it".

M. M. Donnelly

AB/FG



## I REMEMBER MAMA

Early experiences with food and eating help form attitudes about food in general, about specific foods and about trying new foods. Children having the same experiences may still develop individual food preferences.

Sociability at the table is important for full enjoyment of meals.

Feelings are conveyed while eating. A child may dawdle over food because he wants attention, is tired, not hungry, bored or for some other reason. Do adults do the same?

Notions regarding food are many and varied. For example, food is sometimes used as a reward, sometimes for added status. Some foods are assigned to specific meals or special times of the year.

What influence did your "Mama" have on your eating habits?

## ENTERTAINING AT HOME

In some areas, entertaining at home is becoming a "lost art". Many factors play a role in this. Homemakers need to think through the reasons and determine whether or not our emphases have been misplaced.

### Objectives:

1. To help homemakers think through the reasons for entertaining.
2. To help homemakers see that entertaining at home can be simple, yet delightful.
3. To help homemakers see that home entertaining can be a source of much satisfaction.
4. To help homemakers see that entertaining at home may be one way of saving money.

### Suggestions for information which may be included:

1. What do we mean by entertain? (To receive and provide for; to have guests)
2. A discussion of the reasons people entertain -
  - A. To impress - social status
  - B. To repay social obligations
  - C. For business reasons
  - D. To enjoy people and have them enjoy you.
3. Why is less entertaining done at home?
  - A. More women work.
  - B. More fashionable to dine out.
  - C. May afford opportunity to be away from the children.
  - D. Help harder to get.
4. How do you feel about entertaining at home?
5. What do you enjoy most when you are invited out?
6. Planning is key word to success
  - A. Plan number you can easily handle -
    1. Affects what you serve
    2. Affects how you serve.
  - B. Plan your table - formal or informal -
    1. Have some color
    2. Have decorations good size and design.
  - C. Plan your food -
    1. Have things that can be done ahead.
    2. Have things that can be cooked together in the oven.
    3. Have foods you can do and do well.
    4. Have foods that go well together.
    5. Have foods simple but garnished -- almost everyone is watching calories.
  - D. Plan how you will take care of guests needs -
    1. Hostess shouldn't be a "jumping jack" -- especially at a seated dinner.
    2. Ask someone to assist, if needed.

E. Plan for conversation

1. If group is strange to you, several non-controversial subjects may be thought about ahead of time in case conversation lags.
  2. Find out something, if possible, about each guest. Give each a chance to participate.
7. If a meal frightens you, consider simple entertaining other than for a meal -
- A. Morning coffee
  - B. Tea
  - C. Cocktails
  - D. Dessert and coffee.

Activities

1. Have tables set showing attractive informal or semi-formal service -
  - A. Use fondue pot, for example, for centerpiece. Discuss ease of entertaining this way.
  - B. Let a casserole be the focal point.
  - C. Set up a buffet.
2. Illustrate plain food "dressed up" -
  - A. Grapefruit sections for salad - with and without slices of red apple.
  - B. Broccoli with slivered almonds.
  - C. Soup with croutons.
  - D. Canned biscuit topped with butter and Parmesan cheese.
  - E. Sugar cube - lemon extract in a baked apple.
3. Show equipment making it easy for hostess - hot trays, thermal pots, etc.
4. Do cost comparisons of 4 guests served at home vs. eating out.

Emphasis

1. Simplicity
2. Hostess satisfaction and enjoyment!

KEYS TO SUCCESS IN ENTERTAINING

"simplicity is a good policy"

# Four Keys To Successful Entertaining

Plan Your Food

1. Around the time you have to spend...
2. Around the cooking facilities available. (A good soufflé and biscuit can't come from the same oven at the same time.)
3. Around the china and silver available. (It's awkward to wash spoons between courses if it can't be avoided.)
4. Around the choice of menu. (A few well-chosen menus may be repeated until they become "specialties".)
5. ...
6. ...

Plan Your Work

1. Make a work schedule. Think through all that must be done and how long it will take.
2. Write it down in order beginning with what you will take the most time. If you are an inexperienced hostess, this will keep you from forgetting something.

## KEYS TO SUCCESS IN ENTERTAINING

"Simplicity is a good policy!"

### Plan Your Food

1. Around the time you have to spend.
2. Around the cooking facilities available.  
(A good souffle and biscuit can't come from the same oven at the same time.)
3. Around the china and silver available.  
(It's awkward to wash spoons between courses if it can be avoided.)
4. Around the cook's ability and experience.  
(A few well chosen menus may be repeated until they become "specialties".)
5. Around the attention required by the food.  
(Don't let too many "last minute items" keep you from enjoying your guests.)

### Plan Your Work

1. Make a work schedule. Think through all that must be done and how long it will take.
2. Write it down in order beginning with what will take the most time. If you are an inexperienced hostess, this will keep you from forgetting something.

### Plan Your Table

1. Make your table pretty. Have a focal point whether it is flower or not.
2. Make things easy for your guests. Set places far enough apart that each guest is certain what is his.

### Plan Your Service

1. Make things easy on the host by letting him know ahead of time what is expected of him.
2. Make things easy on yourself by using an extra serving table with reserve supplies. A tray for transporting food and dishes from the kitchen can cut on steps.
3. Make things easy on guests and you by being absent from the table a minimum amount of time.

Remember that entertaining does call for effort, but good planning makes it appear effortless. No guest wants to feel he's been a lot of trouble!

September 1, 1968

TO: Home Economics Agents Working with  
Foods and Nutrition for Youth

FROM: Mrs. Kathy M. McLaughlin, 4-H Specialist  
in Foods and Nutrition

SUBJECT: Use of Consumer Competence in Foods and  
Nutrition for boys and girls.

The series of teaching aids entitled Consumer Competence in Foods and Nutrition for Boys and Girls is designed to assist you in solving many of your program planning problems. Careful study will enable you to use it in planning project leader training sessions and in preparing program outlines for leaders to use in teaching boys and girls.

You will notice some similarities in subject matter in each of the five aids. This is due to an attempt to meet different needs of agents. Some aids can be condensed due to lack of time while others can be extended for long workshops and/or a series of lessons.

Frequently, agents feel that older 4-H'ers tend to lose interest in the Foods and Nutrition project due to a lack of new ideas and experiences. Proper use of this teaching aid can eliminate this problem.

If you need further assistance in adapting the teaching suggestions for low-income youth or youth with limited education, please feel free to contact me.

Your evaluation of the usefulness of the teaching aids will be of help to me in better serving you.

## Consumer Competence in Foods and Nutrition for Boys and Girls

### Why Consumer Education for Young People?

Home Economists, parents, and volunteer youth leaders hardly need to be reminded of the huge purchasing power of today's youth. Teenagers, as consumers, are spending over 13 billion dollars of their own money each year, and statistics show that by 1970 the figure will rise to \$20 billion.\*

All too frequently, facts are overlooked that many young people marry soon after, if not before, high school graduation, and that many of them have children before they are out of their teen years. These facts alone evidence a need for the support of early teaching of good food planning, budgeting, and buying. Needless to say, a program of food management would be of inestimable value to youngsters in low-income areas, and to girls who will become employed homemakers.

- I. Objectives for a program of consumer competence in foods and nutrition.
  - A. To help youth develop an awareness and an understanding of the need for consumer education as it relates to foods and nutrition.
  - B. To teach youth basic principles or concepts of food buymanship that have long range use.
  - C. To help youth identify their own values regarding:
    1. the importance of management in food selection, preparation, and use.
    2. the necessity of acquiring and applying knowledge of nutrition in food consumption.
    3. the significance of economy in food purchasing habits to enable gratification of some other needs and wants.
  - D. To acquaint youth with our food marketing system.
  - E. To assist youth in developing an awareness of the available sources of consumer information.
  
- II. Audiences
  - A. Adult leaders
  - B. Parents
  - C. Youth - low income or non-low income
  
- III. Possible Usage
  - A. 4-H Project Leader Training
  - B. 4-H Club Programs
  - C. Special Interest Programs (individual or a series of lessons)
  - D. 4-H Project ideas (Foods and Nutrition -- all units -- Food Preservation, Management, Home Economics)
  - E. Ideas for radio and television programs and news articles.
  - F. Ideas for visual aids.
  
- IV. Points to Remember When Teaching Consumer Competence in Foods and Nutrition for boys and girls.
  - A. Teach food buying concepts that will be guides for future decisions.
  - B. Constantly point out that it takes time, thought and experience to be a wise consumer.
  - C. Teach food buying and management objectively, as an individual must make his own decisions.
  - D. Explore ways of incorporating consumer information when teaching nutrition, meal planning and preparation, and food preservation.

E. Keep your information up-to-date, since consumer information is quickly outdated.

References:

Adams, Eleanor, "Guiding the New Consumer"  
Forecast for Home Economics, Sept. 1964

Consumer Competence in Foods and Nutrition. Prepared by Charlene K. Brelsford, Extension Foods Specialist, N. C. Agricultural Extension Service. Raleigh, N. C. 27607.

Consumer's All, The Yearbook of Agriculture, 1965  
U. S. D. A. \$2.75 (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.)

\*Home Economics with Emphasis on Consumer Education, National 4-H Service Committee, 59 East Van Buren Street, Chicago, Illinois 60605.

"Needs of the Teen-Age Consumer." Speech by Jean Baer, Senior Editor and Public Relations Director, Seventeen Magazine, before the 40th annual convention of the Soap and Detergent Assoc., Jan. 26, 1967.

Olmstead, Agnes. "How to Teach Food Buymanship," What's New in Home Economics, March, 1968, Vol. XXXII No. 3.

"The 25 Billion - a Year Accent on Youth," Newsweek, Nov. 30, 1964.

"U. S. D. A. Spotlights the Consumer." Remarks by Deputy Assistant Secretary of Agriculture Trienah Meyers. National 4-H Club Congress, Chicago, Ill., Dec. 2, 1965.

Wilson, Jane S., "Better Meal Management," Forecast for Home Economics, Nov. 1964, Vol. 13, No. 3.

Teaching Aid  
For  
Agents and/or Leaders

Chart Your Course for Better Food Management

Clientele: Early teen and older youth. Leaders working with these age groups.

Objectives:

1. To help the young consumer identify his own values regarding food selection, preparation and use.
2. To help the young consumer learn some basic food management principles.

Supporting Teaching Aids Available:

Consumer Competence in Foods and Nutrition, Prepared by Charlene K. Brelsford, Extension Specialist, N. C. Agricultural Extension Service, N. C. State University, Raleigh, N. C. 27607.

Money Management, Your Food Dollar. Money Management Institute, Household Finance Corporation, Chicago, Ill. Revised 1966.

Olmstead, Agnes. "How to Teach Food Buymanship." What's New in Home Economics. March, 1968, Volume XXXII No. 3.

Wilson, Jane S., "Better Meal Management," Forecast for Home Economics, Nov., 1964, Vol. 13, No. 3.

Some Ideas for Teaching -- Chart Your Course for Better Food Management

A. Organized Classes

1. Define home management and relate it to food management. Include a discussion of goals and values.
2. Plan for a 'brainstorming' session. Ask participants to list resources that could be used in feeding the family. Discuss. A flannel board could be used as a visual aid.
3. Explain and illustrate the relationship between resources. Discuss the management process and give particular attention to budgeting.
4. Explore the use of problem solving as a teaching technique in relation to values and the use of resources. What factors must be considered in making buying decisions? Share your own shopping and planning experiences -- Why you buy what you do in relation to the way you live. Example: Explain why a young bride buys differently from a homemaker who has been married for a number of years -- because she doesn't have as much skill, equipment, storage space, etc. Share the experience of a big family vs. an elderly couple going food shopping. Use selection of food items as examples.
  - a. One example might be biscuits -- Making them from the basic ingredients vs. buying biscuit mix vs. canned refrigerator biscuits vs. brown 'n serve biscuits. Prove that each is a best buy for a family at a certain time.

- b. Another example might be chicken. Check an ad for price differences. How important is price difference? What personal or individual factors would be involved in making the decision?

B. Other teaching techniques

1. Prepare a newsletter for project leaders and 4-H'ers enrolled in a foods and nutrition project.
2. Prepare a teaching outline to be used by project leaders. Give them extensive training in its use.

Suggestions for Evaluation

Evaluation

1. Ask each participant to list resources which could be used in feeding the family.
2. Ask each to list the things they feel most important considerations in feeding the family. Names should not be attached as this is a personal matter.

Suggested Home and/or Project Experiences

1. Prepare a list of convenience foods which cost less or about the same as home-prepared foods made from basic ingredients.
2. Learn and teach food preparation skills which help cut food costs.

Teaching Aid  
for  
Agents and/or Leaders

Food Planning

Clientele: Early Teen and Older Youth

Objectives:

1. To help youth understand the relationship between applying knowledge of nutrition and principles of food management.

Teaching Aids Available:

Consumer Competence in Foods and Nutrition, Charlene K. Brelsford, Foods and Nutrition Specialist, N. C. Agricultural Extension Service, N. C. State University, Raleigh, N. C. 27607.  
(See pages 2.5, 2.6, 5.3, for other sources of information. Many of those listed should be on file in your office.)

Family Food Budgeting for Good Meals and Good Nutrition. U.S.D.A. publication.

Wilson, Jane S., "Better Meal Management," Forecast for Home Economics, Nov., 1964, Vol. 13, No. 3.

Suggestions for Teaching Food Planning

A. Organized Classes

1. Briefly review the Basic Four food groups and the use of menu patterns. Ask group to plan menus for a day. Analyze the meals in terms of what substitutions could be made to make it more economical, add variety, save preparation time, etc.
2. Ask participants to list and explain some factors to consider in planning menus for the family or have buzz groups to discover factors to consider. \*The above techniques and information could be incorporated into any nutrition or food preparation class.
3. Prepare a visual to aid in teaching some usually good buys in each of the Four Food Groups. Use food models or illustrations. Incorporate this information when teaching lessons on dairy foods, breads and cereals, etc. or when assisting with these 4-H projects.

B. Other teaching techniques

1. Plan a series of radio and television programs and/or a series of newspaper articles on buying guides for foods popular with teenagers. Examples -- compare price, quality, and use of popcorn packaged in different ways.
2. Prepare an exhibit or news article on purchasing snack items. Give some attention to nutrition.
3. Prepare a teaching outline and/or kit for use by leaders and 4-H members.

Evaluation Suggestions

1. Ask participants to list on paper some usually good buys in each of the four food groups.
2. Ask participants to plan menus for a day including some usually good buys in the food groups. Evaluate according to nutritional needs which are met.

Suggested Home and/or Project Experiences:

1. Complete Science in 4-H experiment M-1 (1-2) order no. 72 entitled, Evaluation of Different Sources of Canned Vegetables.
2. Plan meals for the family for a week. Evaluate according to nutritional needs. Make an inventory of food on hand. Prepare a grocery list and shop for the food using some of the principles learned. Upon returning home check the register tape against cost of each item purchased. Store food items properly. Evaluate the experience. What would you do differently? Record your results and give your parent's evaluation. Their assistance may be needed for the entire project.
3. Plan menus and explore ways of varying them for more variety, or to make them more economical, or easier to prepare. A menu could also be varied for families at different stages in the family life cycle.
4. If enrolled in 4-H Foods and Nutrition Project include experience in food buying as you plan for meal preparation. Record your learnings.
5. Compare and make a list of foods of similar nutritive values. Include quantity and price which might be most economical if a limited budget presents a problem.
6. Study changes in eating habits and food buying.
  - a. Changes in the consumption of a particular food. Do we eat more or less of it than in the past?
  - b. Changes in food patterns. How do the foods we include in our diets today differ from the past? Why is there this difference?

Teaching Aid  
for  
Agents and/or Leaders

Learn to be a Good Food Shopper

Clientele: Early teen and older youth and leaders working with these age groups.

Objectives:

1. To help the young consumer become more aware of the need for planning in food buying.
2. To help the young consumer learn the importance of comparing price and quality in making buying decisions.
3. To inform the young consumer of the purpose and function of protective agencies and organizations.
4. To inform the young person of his responsibilities as a consumer.

Supporting Teaching Aids Available:

Be A Good Shopper, Division of Home Economics, Federal Extension Service, U. S. Department of Agriculture. June, 1965.

Consumer Competence in Foods and Nutrition, Prepared by Charlene K. Brelsford, Extension Foods Specialist. N. C. Agricultural Extension Service, N. C. State University, Raleigh, N. C. 27607.

Money Management, Your Food Dollar, Money Management Institute of Household Finance Corp., Prudential Plaza, Chicago 1, Illinois, 1960.

"Shopping Sense" Ideas for Stretching Food Dollars. Issued by the President's Committee on Consumer Interests.

Slides: Be A Better Shopper, Buying in Supermarkets, N. Y. State College of Home Economics, Cornell University, Ithaca, N. Y. (Available on loan from Home Management Department of N. C. Extension Service, N.C.S.U., Raleigh, N. C. 27607.)

Suggestions for Teaching --- Learn to be a Good Food Shopper.

A. Organized Classes

1. Discuss the need for planning in home management. Give particular attention to planning for food buying.
2. Have a "brain-storming" session. Ask participants to give reasons for or advantages of having a grocery shopping list. List on chalk board, if available. Give guidelines on how to make a grocery shopping list.
3. Divide the participants into small groups. Provide each group with an organized list of food items to be organized according to the location of items within the grocery store. Example -- All frozen foods together, canned fruits, canned vegetables, breads, fresh produce, meats, etc.
4. Go on a tour of the grocery store to help young participants become more familiar with it's organization. Explain how this is related to time, energy, and money management. Discuss ways to save time in the supermarket.
5. Briefly discuss and illustrate ways of comparing price and quality of food items. Give attention to labels, specials, multiple pricing, package sizes, food in different forms. Illustrate with food products.

6. Display newspaper and magazine advertisements. Explain how these can be of help to the shopper and how some can be misleading. Give examples. Discuss other methods and materials used to motivate us to buy certain foods.
7. Discuss the functions of Agencies which protect consumers. (1) Better Business Bureaus (2) Federal Trade Commission (3) The Food and Drug Administration.
8. Summarize by discussing responsibilities of the consumer.

B. Other Techniques

1. Prepare a newsletter to include information on learning to be a good food shopper. Ask 4-H'ers or other youth to assist. Evaluate its effectiveness by a check sheet or discussions with leaders and 4-H members.
2. Prepare a program kit or outline to be used on a loan basis by 4-H members, 4-H leaders, or other youth leaders. Include visuals, and references.
3. Present a radio or television program on learning to be a good food shopper. Include 4-H members or other youth to tell of some of their experiences in learning to be a good food shopper.

Home and/or Project Experiences for Youth:

1. Complete Science in 4-H Exercise No. 74 Marketing M-3 -- Exercise in Improving Shopping Habits at the Supermarket.
2. Over a period of time, the participant can assist parent in organizing the family grocery shopping list.
3. Over a period of time, evaluate food advertisements. Determine whether or not certain items advertised as specials would be a good food buy for your family. Explain and describe on paper or in project record book.
4. Compare and record prices of a food in different forms.
5. Explore ways of sharing your knowledge with others.

A Suggestion for Evaluation of  
"Learn to be a Good Food Shopper"

Circle "T" if the statement is correct and "F" if the statement is false.

- T F 1. Guarantees on items purchased are always of benefit to the consumer.
- T F 2. It is the responsibility of the consumer to report dishonesty, fraud, or law violations to the proper agency.
- T F 3. The grocery store nearest the home is always the best place to shop for the family.
- T F 4. Items on sale are always wise investments for every consumer.
5. List 3 ways to avoid impulse buying.  
1.  
2.  
3.
6. The best time to shop for groceries is:  
1.  
2.  
3.
7. List four helpful shopping tips which you have learned.  
1.  
2.  
3.  
4.

Teaching Aid  
for  
Agents and/or Leaders

The Grocery Bill

Clientele: Early teen and older youth

Objectives:

1. To stimulate interest in the cost of individual food items.
2. To help the young consumer become more aware of the reasons for fluctuation in food prices.
3. To help the consumer understand factors which determine size of the supermarket bill.
4. To help the consumer gain an understanding of how the food dollar gets divided for purchases.

Supporting Teaching Aids Available:

"A Dollar's Worth of Food," prepared by Ruby P. Uzzle, Consumer Marketing Economist, N. C. State University, Raleigh, N. C. 27607.

Consumer Competence in Foods and Nutrition, Charlene K. Brelsford, Extension Foods Specialist, N. C. Agricultural Extension Service. N. C. State University, Raleigh, N. C. 27607.

Family Food Budgeting. Home and Garden Bulletin No. 94. U. S. Department of Agriculture. (A copy should be in your files)

"How Much Do You Spend for Groceries," reprinted by permission from Changing Times, the Kiplinger Magazine (Jan., 1968). (A copy should be in your files)

Money Management, Your Food Dollar. Money Management Institute of Household Finance Corp., Prudential Plaza, Chicago, Ill., 1960. pp. 3-6.

What Makes Food Prices. Marketing Economics Division, Economic Research Service, U. S. Dept. of Agriculture.

"Your Grocery Bill." prepared by Ruby P. Uzzle, Consumer Marketing Economist, N. C. State University, Raleigh, N. C. 27607.

Some Ideas for Teaching "The Grocery Bill"

A. Organized Classes

1. Prepare a list of food items or show illustrations of food items. Ask participants to estimate the cost of each item. Provide recent prices from the local supermarket. Determine to what extent participants are aware of prices.
2. Prepare a poster or visual aid on a flannel board to assist in explaining reasons for fluctuation in food prices. (a) physical reasons (b) economic reasons (c) merchandising practices.
3. Explain factors which determine or make food prices-assembly, transportation, processing, wholesaling and retailing.
4. Tour a food processing plant and ask the guide to explain factors which determine the cost of the commodities. Example: dairy

5. Explain and illustrate factors which determine our Supermarket Bill.  
(a) Our income; (b) Our family's wants and needs (c) Our other purchases. Discuss the cost of foods eaten in a restaurant, school cafeteria, etc.
6. To give an idea of how the average family divides its food dollar, prepare a poster using food group illustrations to show:

1/3 or 33-1/3% Meat, Poultry, Fish  
16% Fruit and Vegetable  
15% Dairy Foods  
13% Cereals and Bakery Products  
About 22-2/3% for all other foods  
combined

7. Explain how home production of food can release money for other uses and can help, in many cases, improve family diets. Display items produced and/or preserved at home. Compare to cost of commercially produced and processed at home. Of course, you must consider labor, time, energy, and cost of home produced and preserved foods. Discuss quality.

B. Other teaching techniques

1. Prepare a newsletter to include information about your grocery bill and suggestions for home and/or project experiences. Evaluate.
2. Present a radio or television program to include information on the grocery bill. Feature a 4-H'er or other young person who has completed or is working on a special project or home experience. This might also be a news article idea.
3. Prepare a kit to include visuals, references, and an outline to be used on a loan basis by leaders and 4-H members.

Suggestions for home and/or project experiences

1. Keep account of your family expenditures for food. Determine what percent is spent for meats, vegetables and fruits, dairy products, etc. Determine how much of the grocery bill is for "other purchases."
2. If your family produces and/or preserves food at home, make a list of these items. To become more familiar with food costs, discover the cost of these items if commercially produced and processed.
3. Investigate one or more aspects of a food commodity; for example: bread
  - a. The type of wheat.
  - b. How the flour is processed.
  - c. The various processing methods used. How were the no-sift flours developed?
  - d. The market structure -- from field to consumer.
  - e. Study the price spread between wheat and bread.
  - f. Compare the regular flour, no-sift flour, and the new instantized flour. Prepare a food using the three types. Compare the finished products.

Suggestions for Evaluating "The Grocery Bill"

Circle "T" if the statement is true and "F" if the statement is false.

- T F 1. Food prices have been rising at a higher rate than most other things we need for everyday living.
- T F 2. The largest portion of every dollar spent for food goes for meat, poultry, fish.
- T F 3. Ages of family members is a factor which influences the size of the supermarket bill.
- T F 4. As the income goes up, families spend more total dollars but a smaller percent of the income for food.
- T F 5. A smaller supply of a food item can cause the price to become higher.
6. List three factors which determine the size of the supermarket bill.
- 1.
  - 2.
  - 3.

Teaching Aid  
for  
Agents and/or Leaders

Spotlight on Labels

Clientele: Early teen and older youth and leaders working with this age group.

Objectives:

1. To stimulate interest in packaged food labels.
2. To help the young consumer become more aware of the laws which protect his food supply.
3. To help the consumer learn to interpret labels to assist in saving money, comparing quality and price, and in taking better care of items purchased.

Supporting Teaching Aids Available:

Consumer Competence in Foods and Nutrition. Prepared by Charlene K. Brelsford, Extension Foods Specialist, N. C. Agricultural Extension Service, Raleigh, N. C. 27607.

It's on the Label. National Canners Association, 1133 20th Street, N. W., Washington, D. C. 20036.

Read the Label on Foods, Drugs, Devices, Cosmetics and Household Chemicals. U. S. Department of Health, Education, and Welfare, Food and Drug Administration. FDA Publication No. 3, Revision No. 4 (Reprinted August, 1963)

"The Fair Packaging and Labeling Act" Forecast for Home Economics, Feb., 1968, Vol. 13, No. 6.

The Label Tells the Story. Grocery Manufacturers of America, Inc. 205 East 42nd Street, New York, N. Y. 10017. 1964.

Services for You, Consumer and Marketing Service, U.S.D.A. (A copy should be in your files)

Everyday Facts About Food Additives, Manufacturing Chemists Assoc., Inc., 1825 Connecticut Avenue, N. W., Washington, D. C. 20009.  
(A copy should be in your files)

How to Use USDA Grades in Buying Food, Consumer and Marketing Service, U.S.D.A.  
(A copy should be in your office)

Slides: Be a Better Shopper. Buying in Supermarkets. Extension Publication of N. Y. State College of Home Economics, Cornell University, Ithaca, N. Y. Available on loan from Home Management Dept., N. C. Agricultural Extension Service, N. C. State University, Raleigh, N. C.  
(Would be good for leader training or series of lessons)

Some Ideas for Teaching "Spotlight on Labels"

1. For an interest approach, place canned and packaged items on a table. Ask audience to give reasons for having labels. Discuss.
2. Discuss briefly the laws which protect our food supply. Explain differences between federal inspection laws, grades, and brands.

- Give particular attention to the laws regulating labels on food packages.
3. Reproduce a large label on a poster. Discuss and point out mandatory and additional information found on labels. Check the points on the poster or list on a blackboard. (This is also an exhibit idea)
  4. Display a food item such as frankfurters. Use packages marked as "All Beef" "All Meat", and "Cereal Added." Discuss the difference in products and point out that careful reading of labels can perhaps prevent the consumer from paying "All Beef" prices for "Cereal Added." (This is just one example.) Other examples might be -- Are you buying chocolate milk or chocolate drink; fruit juice, fruit drink, or juice cocktail? Explain the differences.
  5. Display a product or several products packed in different ways. Examples: Canned peaches with light syrup and canned peaches with extra heavy syrup; canned asparagus spears and canned asparagus pieces; canned whole kernel corn and canned cream style corn. In many cases there will be a difference in price. Explain how selecting according to use and reading the label can help the consumer.
  6. Explain and illustrate how the shape and size of a container can deceive the consumer. Compare the net weight and price.
  7. Discuss food additives, their purpose, and legislation governing their use. Display a product and list the food additives it may contain.
  8. Discuss ways in which the consumer can help improve labeling.

#### Evaluation:

1. Divide into small groups (preferably two in a group or one label per person if possible). Give a food label to each group and have them circle the information required by the Federal government.
2. Have audience list on paper ways in which reading labels can help the consumer. Encourage them to list as many as possible.

#### Suggested home and/or project experiences.

1. Compare cost of products packaged in different ways. Determine when each would be a good buy. Record your findings.
2. Visit the supermarket to compare information on labels. List and explain cases in which examining the label can help your family get a better quality product for the price. Use as an example item #4 under Some Ideas for Teaching "Spotlight on Labels."

## THE "IFS" OF BUYING FOOD TO CONSERVE

As farm population continues to decline, so does the number of family orchards and gardens. More and more families rely in part or totally on food produced by a decreasing percentage of our population.

Prices paid for food purchased are dependent primarily on two factors: the season of the year which, in many instances, determines the supply, and the form in which the food is purchased---fresh or processed.

An interesting study in food economics is to compare prices of food in fresh and processed forms. It would be equally revealing for families to compare the cost of foods produced and conserved at home with those sold at the marketplace.

This lesson is designed to help families who do not have needed resources to produce food at home. It may be used with urban groups, rural - non farm families, senior citizens, and other groups.

Objective - to help families who do not have resources necessary for food production to see that there may be advantages in buying foods at attractive prices during peak production and in conserving these properly.

The following "IFS" should be considered:

### IF it is economically feasible

Some fruits such as peaches and apples, may often be bought cheaper than they can be grown in the family orchard. Likewise it isn't profitable for some families to have a vegetable garden. If this is true, why not consider buying fruits and vegetables to conserve? These points may help the homemaker decide if this is desirable economy-wise:

Maturity - is the product available at peak maturity?

Variety - does the available variety lend itself to the method of conserving I want to use?

Time and help - are time and help available to conserve the food before it deteriorates in quality?

Equipment - do I have all necessary equipment.

Know How - do I know how to conserve the product so it will be safe, nutritious, flavorful?

### IF satisfaction results

At least a partial food supply conserved through family cooperation can bring much satisfaction. Some homemakers enjoy the hobby of making preserves, pickles and other products for their family.

IF proper storage is available

Pantry, freezer, refrigerator storage that is satisfactory should be available. The quality of the product will be determined, in part, by the adequacy of storage.

IF convenience is important

These home conserved foods are truly convenience foods - ready for unexpected guests or to add to a family meal. They can also stretch the food budget later.

IF marketing is a possibility

Many homemakers are supplementing their income by selling conserved products. If there is an inexpensive source of raw products, marketing quality conserved products is a possibility for additional income.

If a family decides it is wise to buy food to conserve, it will involve locating a source and the selection of raw products, cooperation of family members, involvement of management practices, and know-how. The decision can be challenging and rewarding.

Some methods of evaluation might include:

1. The number of families who purchased food to conserve
2. The number of requests for assisting these families
3. The amount of food purchased and conserved by these families
4. Evaluation made by families to include:
  - a. cost of a given quantity of raw products
  - b. amount of foods conserved from this given quantity
  - c. cost of this amount of food if purchased in the same conserved form
  - d. comparison of b and c
  - e. time involved (if this is important)
  - f. some measure of satisfaction experienced

References

1. Circulars on Canning, Freezing, Pickles, Preserves etc., N. C. Agricultural Extension Service.
2. Consumers All - U. S. Government Printing Office, 1965
3. "Proper Food Storage Saves Money" What's New in Home Economics, April 1966, pp. 43-48.
4. Protecting Our Food, The yearbook of Agriculture - U. S. Government Printing Office, 1966.
5. The Lifeline of America - Development of the Food Industry, Edward C. Hampe Jr. and Merle Wittenburg, McCraw - Hill, Inc. 1964.

# HOW MUCH EATING MEAT?

**1,000 lb.  
STEER**



**590 lbs.  
GOOD TO CHOOSE  
BEEF**



**465 lbs. Retail Cuts**

PORTERHOUSE, T-BONE & CLUB STEAK		35
SIRLOIN STEAK		40
ROUND STEAK		65
RIB ROAST		45
BONELESS RUMP ROAST		20
CHUCK ROAST		105
HAMBURGER		110
STEW MEAT & MISC. CUTS		45
BONES, FAT, WASTE & SHRINK		125
<b>EATING MEAT</b>		<b>465 LBS.</b>

NOT ALL CATTLE ARE BEEF...NOT ALL BEEF IS STEAK

## How Much Meat In A Steer--Calf--Lamb Or Hog

The following table shows the pounds of carcass that you can expect from different classes and grades of livestock. In addition it shows the amount of meat that you can expect to get from each 100 pounds of carcass (dressing percentage).

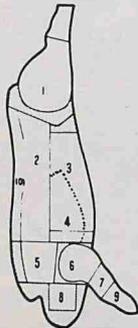
This dressing percentage will vary with the amount of fat (finish), the amount of weight in the digestive tract and conformation. A thick muscled, fat animal will yield a heavier carcass than one poorly muscled or finished.

Cutting losses will vary with the amount of boning and closeness of trimming.

BEEF	Live Weight	Approx. Dressing	If Dressed Wt. Was	Approx. Pkg Wt. Would Be
Choice	1000 lbs.	59%-62%	590 lbs.	465 lbs.
Good	1000 lbs.	56%-59%	560 lbs.	470 lbs.
Standard	1000 lbs.	50%-53%	500 lbs.	455 lbs.
Commercial	1000 lbs.	48%-53%	480 lbs.	425 lbs.
PORK (Head & Leaf Lard In)	200 lbs.	72%	145 lbs.	109 lbs.
VEAL	200 lbs.	61%	122 lbs.	107 lbs.
LAMB	90 lbs.	48%	43 lbs.	33 lbs.

OVER THE DESK OF NITA ORR  
HOME ECONOMIST IN FROZEN FOODS  
N. C. AGRICULTURAL EXTENSION SERVICE

**145 lb. PORK  
CARCASS**



(USDA NO. 2 GRADE APPROX.)  
**Pork Carcass  
Yield**

	Approx. % of Dressed Wt.	1 lb.
1. HAM	18%	26-28
2. PORK LOIN (Chops & Roasts)	14%	18-20
3. BACON	15%	19-22
4. SPARERIBS	3%	4-6
5. BOSTON BUTTS	6%	7-9
6. PICNIC SHOULDERS	7%	9-10
7. PORK HOCKS	3%	4-5
8. HEAD	6%	7-9
9. FEET	3%	4-5
10. LARD	25%	34-41
<small>Meat Cuts, Waste &amp; Trimmings</small>	100%	145
<b>EATING MEAT</b>		<b>101-111 lbs.</b>

## BEEF CARCASS MEAT YIELD

	APPROX % OF DRESSED WT.	FROM 590-LB. CARCASS
1. ROUND (Slow Cooking Steaks, Roasts)	22%	120-130 lbs.
2. LOIN (Sirloin, T-Bone, Club Steaks)	17%	95-105 lbs.
3. RIBS (Standing & Rolled Rib Roasts)	9%	48-58 lbs.
4. FLANK (Steaks or Stew Meat)	4%	20-25 lbs.
5. CHUCK or SHOULDER (Pot Roast & Slow Cooking Steaks)	26%	148-158 lbs.
6. PLATE (Corned Beef, Stew Meat, Short Ribs)	12%	65-75 lbs.
7. SHANK (Soups & Stews)	4%	20-25 lbs.
8. SUET	6%	30-40 lbs.
	100%	

### AGING...

Never "Age" Pork. Instead freeze it as soon as possible after chilling. Only good quality Beef and Lamb should be "Aged" before cutting for storage. Low grade, lean meat will shrink excessively if "Aged." "AGING" means holding the meat (before cutting) at 34 to 38 degrees for seven to ten days.

### FREEZING...

Slow freezing is undesirable as it makes for greater breakdown of muscle cells and subsequent greater juice losses when meat is thawed. Freeze at temperatures as far below zero as possible.

Store meat at zero or lower to prevent rapid development of rancidity. The storage temperature should not vary; fluctuations foster dehydration.

Source: American Meat Institute, National Livestock and Meat Board, and University of Wisconsin Meat and Animal Science Department. Information approved for North Carolina use by John Cristian, Extension Professor of Food Science, N. C. State University, June 1968.

# HOW TO FREEZE

## EGGS COOKED SAUSAGE SAUSAGE and EGGS

*Nita Orr*  
Specialist in Frozen Foods

### HOW TO FREEZE EGGS

**TO FREEZE COOKED EGGS:** cooked egg whites, as such, toughen when frozen. Unless they are in cakes or cooked in some other mixture, do not freeze them. For example, do not add chopped cooked egg whites to a casserole to freeze. Baked dessert meringues freeze well. Fill at serving time.

Cooked egg yolks are good in sandwich fillings or other suitable dishes.

**TO FREEZE RAW EGGS:** freeze only chilled eggs of good quality. Freeze in quantities likely to be used at one time. Blend salt or sugar or syrup, or mild flavored honey with raw whole eggs or raw egg yolks to avoid a gummy product. Freeze raw egg whites without adding anything to them.

Add salt to raw whole eggs and to raw egg yolks to use in omelets, scrambled, or in salad dressing. Add sweetening to raw whole eggs and to raw egg yolks to use in cakes or other desserts.

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Egg freezing information: Dr. Fred Tarver, Food Science Department, N.C.S.U. Sausage biscuits: Maude Middleton, Home Economics Extension Agent, Guilford County.

The North Carolina Agricultural Extension Service, North Carolina State University at Raleigh, and the U. S. Department of Agriculture, Cooperating.

Approximate Amounts of Salt, Sugar, Syrup or Honey for Use in

Whole Broken-Out Egg Yolks Prior to Freezing.

Additive	Amount to use		
	Cup	Quart	Gallon
Salt	1 t.	8 t.	1/3 cup
Granulated white sugar syrup or honey	2 T.	1 cup	4 cups

Thoroughly mix the additive with the raw whole egg or yolk. Use a blender or mixer, but mix slowly to keep from getting air into the product. (Air is an enemy of frozen foods.) If you happen to get any chipped or broken shell into the mixture, remove the bits. (If you do not have a blender or mixer, try a fork and a bowl.)

TO PACKAGE RAW EGGS: you can get an idea of the size container you need for a given number of eggs from this table.

Broken-Out Whole Eggs per Cup, Quart and Gallon of Each Egg Weight Classification			
Weight Classification	cup	quart	gallon
Pee Wee	8	32	128
Small	7	28	112
Medium	6	24	96
Large	5	20	80
Extra Large	4	16	64

Use any good frozen food container for eggs. Since amounts of eggs vary according to the planned use, polyethylene bags work well. Eggs do not expand very much, but in a tall slender container leave space at the top for expansion else the top may be pushed off the container. The amount of space to leave is hard to determine without experience. You want to leave the amount that will fill with expansion but not enough to leave the top of the eggs exposed to air. Amount depends on the size and shape of container and on rate of freezing. The flexibility of the polyethylene bag will take care of the expansion.

**LABEL THE CONTAINER:** label with the date, "whole eggs," "egg yolks" or "egg whites" and the number or amount. Indicate whether eggs contain salt or sweetening. (So that some hurried morning you won't try to feed the family sweet scrambled eggs.) Freeze immediately.

**TO FREEZE IN BOILABLE POUCH:** if you use a boilable pouch that must be sealed, press out the air in the unfilled part of the pouch and seal. Or you can seal the pouch except at one corner (your seal will be sort of slanted), insert a child's bubble blower or heavy milk-shake straw into the open corner, put your mouth on the end of the straw and pull the air out. Hold just below the spot while you seal the small place.

If you use a boilable pouch that requires gooseneck twist, press the air out of the pouch, twist the top then turn the twisted top down and fasten with a plastic covered wire. With either pouch leave some space between the food and the closure. It is well not to fill the pouch more than two thirds full.

Air inside the pouch will cause the pouch to float instead of submerge in the cooking water. And, too, the oxygen in the air soon affects the quality of the food.

**TO HASTEN FREEZING:** place a layer of foil between the pouches in the freezer. Be sure foil touches the freezing surface of the freezer. (Keep foil and use again and again for any pouch freezing.) Properly prepared and packaged high quality raw eggs will keep well for 4 to 6 months at 0° F.

**TO THAW:** thaw in the package in refrigerator or under cold running water. Stir eggs before you use them.

It is better to thaw only the amount to use at one time and to use them as soon as they thaw. It is better, too, not to refreeze eggs. Bacteria may grow in thawed eggs, though the refreezing itself would not be harmful.

Put eggs-packaged-in-boilable-pouches directly from the freezer into the cooking pot. Keep the water below boiling while eggs cook.

A GOOD WAY TO COOK SAUSAGE TO FREEZE: press the amount of high quality sausage you want to cook at one time into a cornered pan (or pans). Cook in a moderate oven about 325 degrees. Pour off fat as it accumulates. Cook until the meat turns from pink to gray throughout the piece. Brown the sausage if you plan to freeze it in a pouch or in a biscuit. If not, save the browning until you reheat the sausage to eat.

TO CHILL SAUSAGE: chill sausage quickly. One good way: put a layer of freezer-ice-cubes in a tray. Cover the ice with aluminum foil. Remove the cooked sausage from the pan. Place the sausage on the foil covered ice. Turn the sausage a time or two to chill it quickly.

TO PACKAGE SAUSAGE TO FREEZE: the larger the piece of sausage, the less chance of flavor changes, so if you cook sausage as directed, freeze it in anticipated meal pieces. Cut into individual servings when reheated. If you want to freeze sausage in individual servings cut it in squares or oblongs and wrap tightly in a good frozen food material. If you use freezing foil, reheat in the package. (Cornered pieces are easier to wrap and to store than round ones. Why a round sausage patty, anyway?)

SAUSAGE BISCUITS: bake 1 to 1½ inch party square biscuits 6 to 8 minutes at 450 degrees to brown-and-serve stage - firm but not brown. (Adjust time for larger biscuits.) Cool fast. (On foil-covered ice is a good way.) Fill with 1/4 inch thick slice of browned cooked sausage cut to fit the biscuit. Wrap individually or in numbers for serving at one time.

#### SAUSAGE AND EGGS IN BOILABLE POUCHES

Follow instruction on how to prepare eggs to freeze except cut the amount of salt to ½ tsp. per cup. Add 2 Tbs. cold water for each egg.

Put a thin piece of chilled, cooked, sausage into a boilable pouch. (Split cooked thick sausage to about 1/4 inch thick or cook your sausage that thick.) It must be thin enough to get piping-hot while the egg cooks. Pour the amount of raw egg mixture you want into the pouch with the chilled, cooked sausage. Remove air. Close: Freeze. To use: Put frozen pouch into a pot of hot water. DO NOT let the water BOIL after the pouch goes in. The secret of a good frozen (or fresh) egg: cook below boiling. With a little practice you can get your eggs exactly the way you want them - with or without sausage. They should be light and fluffy - similar to an omelet. The egg will settle around the sausage into a sort of "pig in a blanket". Nice. Good, too!

Basic script on "When You Buy Beef to Freeze" to use for radio, leader reports, newspaper articles, and to add visuals to and use for demonstrations at meetings and on TV.

Nita Orr  
Specialist in Frozen Foods  
N. C. Agri. Ext. Service  
68/8

### WHEN YOU BUY BEEF TO FREEZE

"We hae meat that ye can eat." This slogan identifies a meat market in Canada - not far across the United States-Canadian border. Sandy Allen (who learned some of his management practices at the School of Business, University of North Carolina in Chapel Hill) runs this market. It must be a source of satisfaction to the families in that shopping area...for it is important to buy "...meat that ye can eat".

We want beef "that ye can eat" (and that is worth its cost) in our freezers. We ask: should I buy beef to freeze when it is on special sale? Should I buy beef by the quarter or half at "hanging weight"? Or buy it already cut into roasts, steaks, and patties? Should I buy beef already packaged to freeze or should I package it myself?

What does "hanging weight" mean? It means the weight of a side of beef or forequarter or hindquarter before it is cut, trimmed, and wrapped. Cutting loss

usually ranges from 23% to 30% but can, and often does, go higher. The amount of cutting loss depends on whether the beef is "high yield" or "low yield". "High yield" meat has more lean meat than "low yield", though the amount of lean does not determine the quality. If you want to know the quality of the beef, buy USDA graded meat. If you do not know the grades, ask your County Extension Agent.

If you buy a half of beef, don't let anybody sell you two forequarters. Your own intelligence, if you stop to think, tells you that a half beef is one forequarter and one hindquarter. It is so identified by the meat industry. But unless you know how beef should look hanging on the rail, you can be "taken in" when you see one front hanging on the rail in the normal manner and the other front hanging with the shank end up with the short ribs removed. This makes it resemble a hindquarter but does not put steaks into it.

No rule fits all situations, so do some simple arithmetic and see what the estimated cutting waste will be on "hanging weight" beef. Then compare the price with that of beef by the piece.

Whether or not you package your own depends on cost and quality of job. Does the beef seller use proper packaging material and know how to put it on?

Can you do a better job? The ideal thing is to have your beef packaged and frozen before you bring it to your freezer. Some places are equipped to do this. It avoids the risk of overloading your freezer with unfrozen beef.

Santa Claus has not gone into the beef business yet, so do not expect the best meat at a too low price. Don't be lured into a business place by low-advertised prices then let yourself be switched to meat at a higher price than it should be. This happens. Called "bait and switch" - bait advertising, switch selling - it is not the best way to buy.

There are beef sales and beef sales. Some are good some are not. Ask yourself: Is this beef worth the money? Do I have room for it in my freezer without crowding out other needed foods?

So if you plan well and buy beef wisely for your freezer, you can say with our Canadian neighbor "We hae meat that ye can eat" and maybe you can add "...and it's worth what it cost".

Basic script on "When You Freeze Pork" to use for Radio, leader reports, newspaper articles, and to add visuals to and use for demonstrations at meetings and on TV.

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68/7

### WHEN YOU FREEZE PORK

Our modern pigs are different from those that arrived May 25, 1539 with DeSota's expedition at Charlotte Harbor, Florida. Those pigs became highly prized food animals and met the needs of that day.

In fact, up until the last few years in our Southland, almost any reference to "meat" meant pork. Cooking vegetables with meat meant seasoning them with pork. Almost all barbecue was pork. Now pork has moved over to share the limelight with other meats, so reference to meat should be specific.

Pork is the favorite meat with many people today - not necessarily because of tradition but because the early wild hogs known as razor backs and stump rooters have changed with the times. Today's pork fits today's needs.

We do not depend heavily on the hog for a source of fat as grandmother and grandfather did, so a leaner hog has been developed. The expression "as fat as a pig" no longer describes the obese.

The National Livestock and Meat Board reports that an average serving of cooked pork - lean and marble (separable fat removed) - as we eat it today provides 22% more protein, 57% less fat, and 36% fewer calories than that indicated on the food composition tables in use for many years.

Pork flavor has never been better, and since flavor largely determines our enjoyment of food, we select pork for many of our choice menus.

Producers pamper their pigs, and processors now make all sorts of good things from pork.

Pork freezes well. If its frozen image is poor it is because the handling and freezing were not done properly. Pork is a sensitive meat. It reacts to poor handling by changing its flavor from excellent to poor.

Control the essential factors that influence freshness and you will have good frozen pork. Think of these factors as the four C's.

CALM, CLEAN, COLD, COVERED.

Since home hog-killing is rare these days, most of us depend on faith that the pig was killed when it was calm in a clean place and manner.

Cold refers to temperature. The simple

story is: Chill as soon as killed. Freeze as soon as chilled. Store at zero degrees fahrenheit.

The COVER, of course, is the package. Its function is to keep the moisture in the pork and the air out so that your frozen pork chops will retain the original moisture and sweetness of fresh ones. Under conditions of frozen storage moisture seeps through packaging material in the form of vapor unless the material is highly moisture-vapor resistant. This is why ordinary fresh-meat paper and so-called "freezer papers" are not good to use for frozen pork. Heavy freezer aluminum foil (not the household foil) is excellent for pork as are some laminated sheets of packaging materials.

Use just enough material to make neat substantial closures with the "drugstore" or "freezer" wrap. Do not scuff, tear, or puncture the package.

It does not matter where you buy your pork to freeze if it has been chilled quickly, handled cleanly, and is FRESH.

Remember: CALM, CLEAN, COLD, COVERED equals CONVENIENT, good pork in the freezer.

Basic script on WHEN YOU BUY A FREEZER to use for radio, leader reports, newspaper articles, and to add visuals to and use for demonstrations at meetings and on TV.  
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68/7

### WHEN YOU BUY A FREEZER

When you buy a freezer use the PCA guide.

P is for performance. What will it do? With a freezer, as with little girls, "...pretty is as pretty does".

Be sure the freezer is built to keep its inside space cold enough for the job it needs to do. Will it hold temperature of 0°F. for frozen food storage? Will it get colder than 0°F. to freeze the food? So if you plan to freeze food, and not just to store already-frozen food, be sure the freezer has enough reserve refrigerating power for the job. Unfrozen food put into a freezer with too little reserve power will not go down to 0°F. promptly as it should.

Do not depend entirely on brand name. A favorite company may make a good refrigerator, but that company may or may not make a good freezer.

The greater the amount of refrigerated surface in the freezer, the better the freezer performs. In a chest type it is better to have refrigeration coils on all four sides and at one end than just on two sides. In an upright type it is better to have refrigeration coils in the walls and under the shelves than just in the walls or just under the shelves.

The better insulated the freezer, the better it performs.

Be sure of sturdy door construction on an upright type. For many reasons it is better not to have shelves on the door. If you want one without door-shelves you can likely get it from any company if you specify this as what you want.

Once you get a freezer in your house, you will likely decide to freeze food as well as store already-frozen food, so it is better to buy a freezer which gets food to 0°F. all the way through the package within 24 hours or quicker.

The C in PCA stands for convenience. Some freezers are made with more gadgets designed for convenience. Gadgets can give trouble. Ask yourself, "Is this gadget a real help?"

Consider the freezer that defrosts itself. Its disadvantages: 1) usually costs more to buy and to operate. 2) The flow of air around and on the packages will dry out anything that's there to dry out. This calls for perfect food packaging. 3) A good gasket seal is doubly important. Any leakage will tend to make the freezer run more. Advantages: 1) No frost to blur labels and food in "see through" materials... no frost to use storage space. 2) Faster freezing and more uniform temperatures throughout the freezer. No defrosting to do. Saves your time, effort, energy and disposition at least once or twice a year.

What type freezer will be more convenient for you? Do you need the top of a chest type for work space? Are you tall enough to bend over and get food from the bottom of it easily? Is there enough floor space for it where you plan to put it?

COST OF FOOD AT HOME

Table 1.--Cost of food at home estimated for food plans at 3 cost levels, December 1967, U.S. average 1/

Sex-age groups 2/	Cost for 1 week			Cost for 1 month		
	Low-cost plan	Moderate-cost plan	Liberal plan	Low-cost plan	Moderate-cost plan	Liberal plan
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
<b>FAMILIES</b>						
Family of 2:						
20 to 35 years 3/ -----	15.50	20.80	24.20	67.30	89.90	104.60
55 to 75 years 3/ -----	12.90	17.60	20.00	56.10	76.00	86.50
Family of 4:						
Preschool children 4/ ---	22.80	30.30	35.10	98.70	131.10	151.80
School children 5/-----	26.20	35.10	40.90	113.60	151.80	177.10
<b>INDIVIDUALS 6/</b>						
Children, under 1 year	3.20	4.10	4.40	13.70	17.70	19.00
1 to 3 years -----	4.00	5.20	5.90	17.30	22.50	25.70
3 to 6 years -----	4.70	6.20	7.20	20.20	27.00	31.00
6 to 9 years -----	5.60	7.50	8.90	24.10	32.30	38.60
Girls, 9 to 12 years -----	6.40	8.60	9.60	27.80	37.20	41.60
12 to 15 years -----	7.00	9.50	11.00	30.40	41.00	47.40
15 to 20 years -----	7.30	9.60	10.90	31.80	41.70	47.10
Boys, 9 to 12 years -----	6.50	8.70	10.00	28.30	37.80	43.50
12 to 15 years -----	7.50	10.30	11.70	32.60	44.80	50.80
15 to 20 years -----	8.80	11.70	13.40	38.10	50.70	58.00
Women, 20 to 35 years -----	6.60	8.80	10.10	28.70	38.10	43.70
35 to 55 years -----	6.40	8.50	9.70	27.60	36.70	42.20
55 to 75 years -----	5.40	7.40	8.40	23.60	31.90	36.20
75 years and over -----	5.00	6.60	7.70	21.50	28.40	33.20
Pregnant -----	8.00	10.30	11.60	34.50	44.60	50.10
Nursing -----	9.10	11.80	13.10	39.60	51.20	56.70
Men, 20 to 35 years -----	7.50	10.10	11.90	32.50	43.50	51.40
35 to 55 years -----	7.00	9.40	10.90	30.30	40.60	47.00
55 to 75 years -----	6.30	8.60	9.80	27.40	37.10	42.40
75 years and over -----	5.90	8.30	9.40	25.60	35.80	40.90

1/ Estimates computed from quantities in food plans published in FAMILY ECONOMICS REVIEW, October 1964. Costs of the plans were first estimated by using average price per pound of each food group paid by nonfarm survey families at 3 income levels in 1955. These prices were adjusted to current levels by use of Retail Food Prices by Cities, released by the Bureau of Labor Statistics.

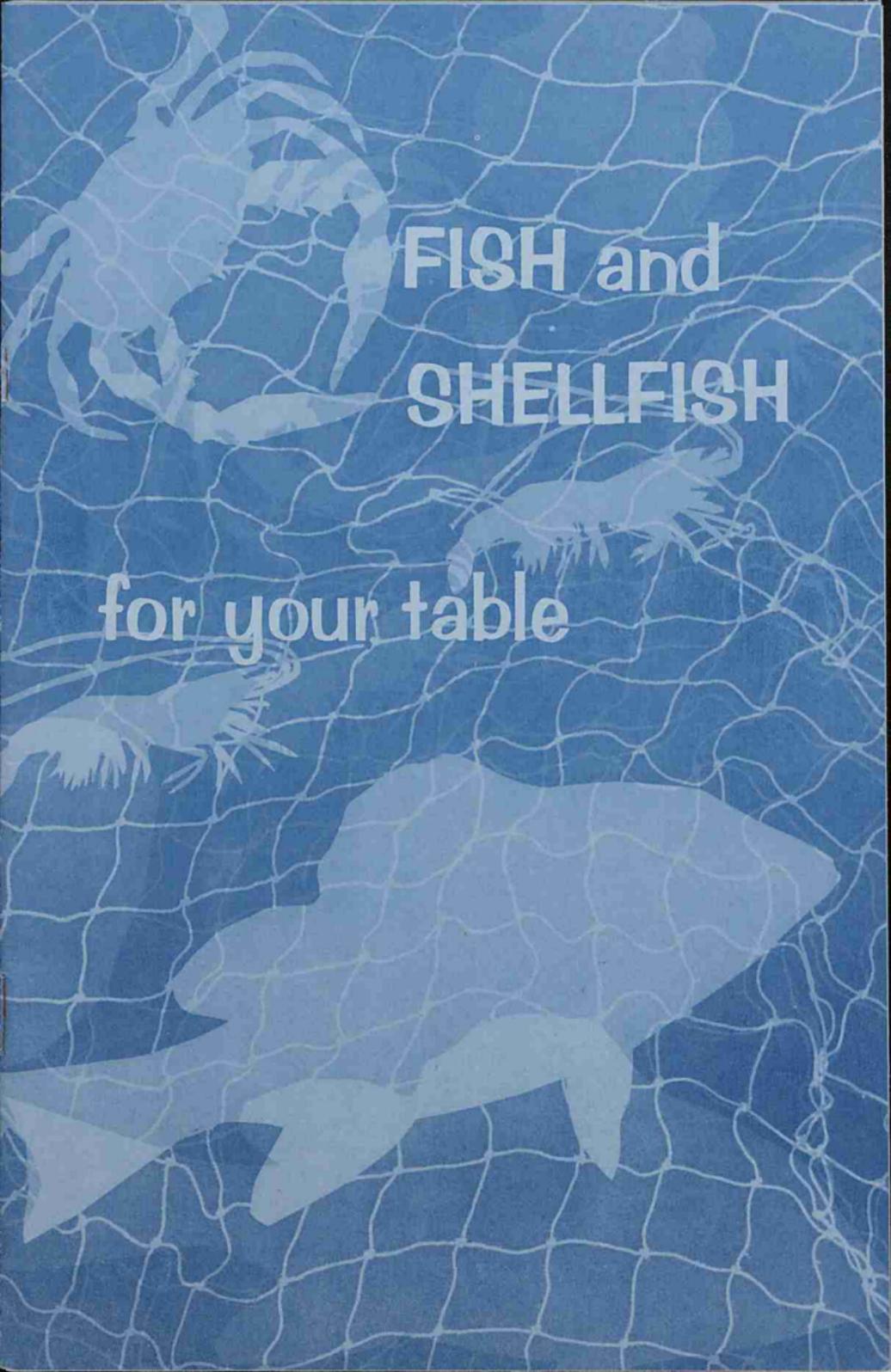
2/ Persons of the first age listed up to but not including the second age.

3/ 10 percent added for family size adjustment. For derivation of factors for adjustment, see Family Food Plans and Food Costs, USDA, HERR No. 20.

4/ Man and woman, 20 to 35 years; children 1 to 3 and 3 to 6 years.

5/ Man and woman, 20 to 35 years; child 6 to 9; and boy 9 to 12 years.

6/ Costs given for persons in families of 4. For other size families, adjust thus: 1-person, add 20 percent; 2-person, add 10 percent; 3-person, add 5 percent; 5-person, subtract 5 percent; 6-or-more-person, subtract 10 percent.



FISH and  
SHELLFISH

for your table

## ACKNOWLEDGMENT

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# FISH and SHELLFISH for your table

CHARLES E. ESHBACH and KIRBY M. HAYES\*

Fish offers many features to give variety, taste appeal, and attractive appearance to meals; it also furnishes essential nutrients. Fish is available in many forms and many species, is convenient to use, and lends itself to countless menu variations.

Yet many food shoppers find difficulty in selecting, preparing, and serving this valuable food. Poor selection, improper storage, and incorrect cooking methods are among the causes of dissatisfaction with the fish dishes they prepare.

All of these problems are easily solved by informed consumers who know the signs which indicate quality, and who are acquainted with the correct preparation and cooking methods.

It is the purpose of this leaflet to suggest ways to select, store, prepare, and cook fish so that the most satisfaction may be obtained from use of this highly-nutritious food.

What to buy, when and how to buy it, how to store and for how long, how to prepare and cook fish are all considered with the aim of enabling the reader to improve purchasing practices, preparation procedures, and cooking methods.

Much data has been reviewed and the recommendations made in the publication reflect the latest research findings.

## **BUYING FISH**

### **SELECTION AT THE RETAIL COUNTER**

Food shoppers who can recognize signs of good quality when purchasing fresh fish, frozen fish, and shellfish are able to make better selections at the retail fish counter.

The flesh, eyes, gills, skin, and odor of the fish and the glazing and the wrapping in which the fish is packaged provide much information about the quality of the fish being offered for sale.

These signs of quality should be kept in mind when buying fish.

\*Professor Eshbach is a Marketing Specialist in the Department of Agricultural and Food Economics, and Professor Hayes is a Food Technologist in the Department of Food Science and Technology, University of Massachusetts.



### Fresh Fish

When buying **fresh fish**, check to determine that the:

- **Flesh** is firm and elastic and not separating from the bones. In buying fillets, look for a fresh-cut appearance and color that resembles freshly-dressed fish. (As fish gets older, the flesh becomes soft and slimy and slips away from the bones.)
- **Eyes** are bright, clear, transparent, full, and often protruding. (As fresh fish gets older, the eyes become cloudy and often turn pink and become shrunken.)
- **Gills** are red in color and free from slime. (As fresh fish gets older, the gills change in color, fading gradually to a light pink and then becoming gray and eventually brownish and greenish.)
- **Skin** is shiny and with color that has not faded. (As fresh fish gets older, the skin markings and colors that are characteristic of the species become less distinct.)

### Frozen Fish

The flesh, odor, wrapping, and glazing are indicators of the quality of frozen fish.

Fish that has been thawed and refrozen loses quality. Fish must be held at zero degrees Fahrenheit or lower to keep quality loss at a minimum. The higher the temperature, the more rapid the loss of quality. Discoloration or a brownish tinge in the flesh is an indication of deterioration. A strong fishy odor is another indication of poor quality.

When buying **frozen fish**, check to determine that the:

- **Flesh** is solidly frozen. (If possible, determine if the fish is held at zero degrees or lower and whether it

had been thawed and refrozen.) The flesh should have no discoloration, brownish tinge, or white cottony appearance.

- **Odor** is not evident or is very slight.
- **Wrapping** in which the fish is packaged is moisture-vapor-proof; there is little or no air space between the fish and the wrapping and there has been no damage to the package material.
- **Glazing** of ice (used to protect shrimp, salmon and halibut steaks or whole fish frozen in the round or dressed form against drying out) is present on these forms of frozen fish.

### **Shellfish**

When buying shellfish, check to see that:

#### **Clams and Oysters In the Shell —**

- Are alive.
- The shells close tightly when tapped.

#### **Shucked Oysters —**

- Are plump.
- Usually have a natural creamy color (some oysters have a natural tan, brown or black film over the mantle).
- Have clear or slightly opalescent liquid.
- Do not have an excess amount of liquid.
- Have a mild odor.

#### **Cooked Crabs and Lobsters —**

- Are bright red.
- Have no disagreeable odor.

#### **Fresh Shrimp —**

- Have a mild odor.
- Have meat that is firm in texture.

#### **Cooked Shrimp —**

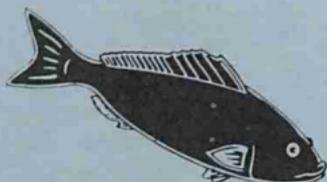
- Have red color in shells.
- Have meat with reddish tint and possibly with some dark red spots.

#### **Scallops —**

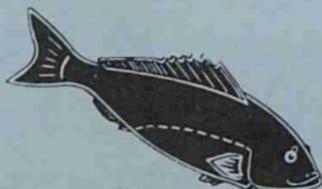
- Have a sweetish odor.
- Are free of excess liquid when bought in packages.

## FORMS OF FISH AVAILABLE

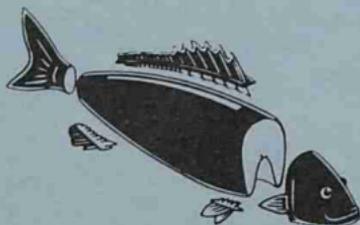
Fresh and frozen fish are available in a variety of cuts or forms. The edible portion varies according to the type of cut. It is about 45 per cent for whole fish and 100 per cent for fillets. The most important cuts include:



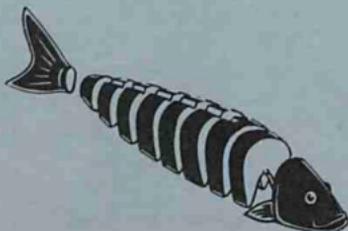
- **Whole or Round.** Fish marketed just as it comes from the water. Needs to be scaled and eviscerated and the head, tail, and fins removed. Yields edible portion of about 45 per cent.



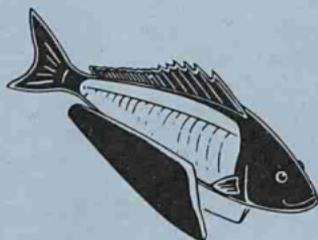
- **Drawn.** Marketed with only the entrails removed. Generally is scaled, with head, tail, and fins to be removed before cooking. Edible portion is about 48 per cent.



- **Dressed.** Scaled and eviscerated, usually with the head, tail, and fins removed. Edible portion is about 67 per cent.



- **Steaks.** Cross-section slices of larger sizes of dressed fish, usually about  $\frac{3}{4}$  inch thick. Yields edible portion of about 86 per cent. It is ready to cook as purchased.



- **Fillets.** The sides of the fish cut away from the backbone. Practically boneless with little or no waste. Ready to cook as purchased.



- **Butterfly Fillets.** The two sides of the fish, corresponding to the two single fillets, held together by the uncut flesh and skin of the belly.



- **Fish Sticks and Fish Portions.** Pieces of fish cut from blocks into portions of uniform width or length. Fish sticks usually measure about 3 inches long and 1 inch wide. Portions are usually larger than sticks, and usually provide one serving. Fish sticks and portions are available breaded, precooked and frozen, as well as breaded and uncooked, and unbreaded and uncooked.

## HOW MUCH TO BUY

Generally, it takes one-third to one-half a pound of the edible part of fish for each person. In order to provide that much edible fish for each person, buy the following amounts of the different forms:

Fresh and Frozen Fish	Pounds Per Person
Fillets, Steaks, or Sticks	1/3
Dressed Fish	1/2
Whole or Round Fish	1

The amount of shellfish needed to provide a serving varies with the cooking method, the size of the shellfish, the recipe used, and the size of servings. The following amounts are good general guides:

Shellfish	Amounts Needed to Serve Six
Oysters and Clams	
In the Shell	3 dozen
Shucked	1 quart

<b>Scallops</b>	1 to 2 pounds
<b>Shrimp</b>	
Headless (fresh or frozen)	1½ to 3 pounds
Cooked Meat	¾ to 1½ pounds
<b>Lobsters</b>	
Live	4 to 6 pounds
Cooked Meat	¾ to 1½ pounds
<b>Crabs (Hard)</b>	
Live (18-36 crabs)	6 to 12 pounds
Cooked Meat	1 to 2 pounds

### Shellfish

Shellfish is available in the following forms:

- **In the Shell.** Clams, lobsters, crabs, and oysters are available in this form. They should be alive when purchased. They can be cooked in the shell. There is great variation in edible portion.
- **Shucked.** Clam, oyster, and scallop meats are available without shells. All the meat is edible.
- **Headless.** Only the tail part of shrimp usually goes to market. It is about 50-60 per cent edible.
- **Cooked Meat.** This is the edible portion peeled from cooked lobster, crab, and shrimp. It is 100 per cent edible. This is a perishable product and requires refrigeration.

## EDIBLE PORTION

The edible portion of fish varies according to the form in which the fish or shellfish is bought, the season in which it is caught, and the variety of the fish.

Following are some approximate percentages of the edible portion for each form of fish and shellfish:

Fish	Edible Percentage
Whole or Round	43 to 47
Drawn (Eviscerated only)	46 to 50
Dressed (Eviscerated, head and fins removed)	65 to 69
Steaks	84 to 88
Fillets	100
<b>Shellfish</b>	
Clams, Hard (In shell)	14 to 20
Clams, Soft (In shell)	23 to 33
Oysters (In shell)	8 to 11
Lobsters (Cooked in shell)	35 to 37
Crabs, Hard (Cooked in shell)	10 to 18
Clams (Shucked)	100
Oysters (Shucked)	100

Scallops	100
Shrimp (Headless, raw)	50 to 60
Cooked Meat —	
Lobsters	100
Crabs	100
Shrimp	100

## SEASONALITY OF SUPPLY AND PRICE

### Supply

Supplies of fresh fish have seasonality. Most types are in larger supply in some months of the year than in others. Also, when a particular variety is most plentiful in local waters, the boats are making their catches in a shorter period of time and the fish arrive at the market in better condition.

Fish are frozen during the seasons of plentiful supply and supplies in storage are large enough so that most varieties of frozen fish are now available throughout the year.

Fresh fish and frozen fish can be used interchangeably, since they differ little in appearance, flavor, and nutritive value when handled correctly and held under the right storage conditions.

*(For an indication of months of largest supply for important North Carolina varieties of fish, based on landings in North Carolina ports, see chart on page 20 under the heading "Seasonality of Supply.")*

### Price

Retail prices of most fish show relatively little change from season to season, especially in recent years when there have been much larger supplies of frozen fish available. However, seasonal supplies do have some effect on prices, especially of those fish which are in large supply in only a few months of the year.

Keep in mind that price alone does not indicate value. Quality of what is purchased and the use to which it is put are also important factors in determining value.

## GRADES OF FISH

There are no Federal standards or grades for fresh fish. But there are official standards for a number of the frozen and pre-cooked fish items.

Standards are available for these frozen fish items: Fish sticks, raw-breaded shrimp, fish blocks, haddock fillets, halibut steaks, raw-breaded fish portions, cod fillets, ocean perch fillets, frozen raw headless shrimp, flounder fillets, sole fillets, fried scallops, and salmon steaks.

### What the Grades Represent

There are four grades: U. S. Grade A, U. S. Grade B, U. S. Grade C, and Substandard. Generally, the grades represent these quality conditions:

**U. S. Grade A** — Denotes a frozen product that has a good flavor and odor and rates high in the particular factors that apply to the particular product. These include such things as color of the flesh, dehydration, freedom from undesirable small fillet pieces, uniformity of thickness of steak, uniformity of size and shape and weight, freedom from bones and blemishes, and having only small defects such as improper packing, cutting, and trimming imperfections, honeycombing, and blemishes.

**U. S. Grade B** — Denotes a frozen product that has a reasonably good flavor and odor and rates reasonably high in the other factors considered in grading frozen fish products.

**U. S. Grade C** — Applies only to frozen raw headless shrimp. The rating for flavor and odor must be reasonably good but the rating for other factors is lower than Grade B.

**Substandard** — Denotes the quality of a frozen product that fails to come up to the requirements of U. S. Grade B or C.

### Wisest Choice Is Usually U. S. Grade A

Selection of U. S. Grade A frozen fishery products is usually the wisest choice when a graded product is available. While this grade may cost a little more, there is a lot of economy and satisfaction from the top grade, since it offers better appearance and quality. Check for U. S. Grade markings on the package.

## HANDLING AND STORAGE OF FISH

Fish is a highly perishable commodity which will spoil quickly unless it is handled with care and kept under refrigeration until time to use it.

### How Quality Is Lost

There are four ways in which quality is easily lost in fresh and

frozen fish — and there are certain things that can be done to prevent or at least reduce this quality loss.

**Growth of Bacteria** increases in fish when sanitation in handling fish is poor and when the storage temperature is not lowered promptly at the time the fish is taken from the water. Bacterial action will not occur to any appreciable extent when fish is frozen and stored at very low temperatures and remains under those conditions.

**Oxidation** of the oil or fat of the fish can cause the fish to become rancid. This can happen to frozen fish even when held at low temperatures. It can usually be recognized by a yellow discoloration on the surface of the skin or on the flesh of the fish that is exposed to the air or by a change in flavor or odor. Wrapping the fish in any of the moisture-vapor-proof wrappings now available, or glazing frozen fish with a thin coating of ice, will keep the air away and greatly reduce oxidative changes.



**Action of Enzymes** in the flesh of the fish causes another type of spoilage. These enzymes, performing a natural building and destroying function during the normal life processes of the fish, are kept well under control as long as the fish is alive. While the enzyme action cannot be stopped entirely after the fish die, the temperature at which the fish is held in storage can control the action to the extent that fish held under good storage conditions do not lose quality.

**Dehydration** is another way in which quality is lost. Fish put directly into zero-degree refrigeration without any protective covering will lose moisture quite rapidly until the fish becomes shrunken and dried. This dehydration not only spoils the appearance of the fish, but also alters the texture and causes a loss of weight and flavor. This drying out is known as freezer burn when it occurs in the freezer.

### **Storing Fresh Fish**

Wrap fresh fish in moisture-vapor-proof paper, or put it in a tightly covered dish and store it in the coldest part of the refrigerator. If fish is wrapped or covered in this way the quality will be maintained and the odor won't affect other foods in the refrigerator.

To maintain the quality of fresh fish, keep it below 40 degrees F. Better yet, keep it at 30 or 32 degrees F., if you have refrigeration facilities that will do so.

### Storing Frozen Fish

Keep frozen fish in the unopened package until time to use it. Storage life varies with the type of storage compartment. Frozen fish can be stored for a week in ice cube compartments, a month in across-the-top freezer compartments, and 6 months in two-door refrigerator-freezer units or home freezers. (It will remain in good condition for up to a week in the freezing unit of the refrigerator, provided the freezing unit is operating efficiently.)

Keep frozen fish solidly frozen and don't refreeze fish that has been thawed. Keep in mind the fact that, even though a food is frozen hard, there can still be loss of quality at temperatures above zero degrees F. So, if you want to get the maximum storage life from frozen fish, keep it at zero degrees F. or lower and, be sure that it is adequately protected by moisture-vapor-proof wrapping or by glazing with ice.

### Storing Shellfish

Fresh shellfish should be stored at temperatures near 32 degrees. Much quality can be lost in a couple of hours if the temperature is even a few degrees higher than that. It is very important to keep fresh or cooked shellfish meats from becoming contaminated by bacteria, as they are easily spoiled.

### Keeping Frozen Fish at Zero Degrees F.

Frozen fish that was of good quality when frozen and that was handled correctly until reaching the storage freezer — and that is then kept at zero degrees F. or lower until used — should stay in good condition for the periods indicated on the chart.

#### Approximate Storage Life of Frozen Fish and Shellfish Held at Zero Degrees Fahrenheit

Fatty Fish	Months
Mackerel, Salmon, Tuna, etc.	Three
Lean Fish	
Haddock, Cod, Swordfish, etc.	Six
Shellfish	
Lobsters and Crabs (Meat)	Two
Shrimp	Six
Oysters, Scallops, Clams (Shucked)	Three to Four

## NUTRITIVE VALUES

Fish rates very high as a source of protein, minerals and vitamins. Fish and shellfish can be used to provide high quality food in the diets of people of all ages. Here is how fish rates in the principal nutritive values:

**Protein** — An excellent source of very good and easily digested protein. A generous serving (4 ounces) of fish will provide about a third of the daily protein requirement of an adult. Nutritionists recommend that about a third of the protein eaten daily come from animal

sources to balance less complete cereal protein and vegetable protein. Fish or shellfish will meet this need.

**Vitamins** — Fat fish such as mackerel, salmon, and herring are rich in vitamins A and D. All fish oils are rich in vitamin D. All fish, both fat and lean types, contain some of the B vitamins. This means that fish contributes generously to the vitamin need of the body for growth and maintaining well-being.

**Minerals** — The mineral content of fish is similar, in general, to that of beef, except that fish provides more iodine and other needed trace minerals such as cobalt and zinc. In fact, no other food contains so much iodine as salt water fish and shellfish. This is an element needed by the body that is not found in many foods.

Other minerals found in generous amounts in fish and shellfish include copper, iron, magnesium, and phosphorus. Some fish are excellent sources of calcium, especially those of which the bones are eaten.

Fish is an excellent source of food value. Flavor, texture, and color have an important part in determining the choice.

## **PREPARATION AND COOKING OF FISH**

### **Thawing Frozen Fish**

You can cook frozen fish, fillets, and steaks in their frozen form, if you allow enough additional cooking time. But if fish are to be breaded and fried or stuffed, it's more convenient to thaw them first to make handling easier. Thawing is necessary before preparation if you are going to clean and dress whole or drawn fish.

Here are some methods for thawing fish:

**At Refrigerator Temperatures** — Thawing at refrigerator temperatures of 40 to 45 degrees F. is the recommended method for thawing frozen fish. Hold the fish at this temperature only until it is easy to handle. A one-pound fillet will thaw in about 18 hours.

**Using Cold Running Water** — The quickest method for thawing whole or drawn fish is to put them in cold running water. Leave fillets and steaks in the package while they are being thawed. The thawing time will vary, depending on the shape and size of the fish. It takes about a half-hour to thaw fillets and steaks in cold water.

**At Room Temperatures** — This type of thawing is not recommended, though it is often used. The thinner parts of the fish, such as the part near the tail, thaw faster than the rest, and if the thawing period is too long, spoilage can start in the parts that thawed earliest. It takes from three to four hours to thaw a package of fillets this way.

**Crushed Ice** — Putting whole or drawn fish in a bed of crushed ice is another method of thawing frozen fish. This is a much slower method, however, and is not used to any great extent.

Generally, thaw frozen fish at refrigerator temperatures whenever possible. If a quicker method is used, thawing in cold running water is recommended.



## COOKING OF FISH AND SHELLFISH

The correct cooking of fish is as important as good selection and storage, if the most satisfaction is to be obtained.

### Rules for Cooking Fish

Here are a few simple rules for fish cookery that will do much to insure success.

- **Cook fish quickly and for as short a time as possible.**

Over-cooking is the most common fish cooking mistake. Cooking too long draws out most of the natural juices and the flesh shrinks and dries out. Fish doesn't need the slow cooking that is used for meat. The sinews that hold together the fibres in fish are jelly-like and are tender. They soften right away when heat is applied.

- **Save any juices that are formed, or any liquid in which the fish is cooked.**

These juices or liquid can be used in sauce to serve with the fish or for use in soup. Cook the bones of boned fish and use the liquid for sauce or soup.

- **Salt the fish before cooking.**

This brings out the flavor.

- **Test with fork to see when the fish is done.**

The fish is done when it is tender, separates from the

bones, and flakes easily. Flaking means pulling the flesh of the fish apart in loose folds or flakes with a fork.

- **Serve fish on a heated platter with sauce or garnish.**  
Fish is at its best when it is cooked lightly and served as soon as possible after it has been cooked.

## METHODS OF COOKING

There are several principal methods of cooking fish.

These include:

- Simmering, poaching, boiling, or steaming.
- Baking.
- Broiling.
- Frying.

In general, the method to use depends on whether the fish is a fat or a lean species.

Fat fish have oil throughout the flesh. Lean fish have the oil concentrated in the liver which is removed when the fish is cleaned. So, lean fish have a drier flesh.

**Fat Fish** include mackerel, salmon, and tuna.

**Lean Fish** include cod, haddock, flounder, sole, pollock, whiting, swordfish, and halibut.

**All Shellfish** are lean.

Almost any kind of fish is good when fried or broiled. Some people consider fat fish best for baking and, lean fish best for boiling, steaming, and for chowders. But any fish can be cooked by the basic cooking methods if allowance is made for the fat content.

Since there are only a few basic rules for fish cookery, variety is obtained by using different cooking methods and by using different sauces and seasonings.

## STEAMING OR BOILING

### Boiling

Boiling is a good economical way to cook thick fish steaks, fish that is to be served cold, or fish for serving at more than one meal. Left-over fish may be broken into flakes and prepared quickly in such dishes as salads, hash, and creamed dishes.

### Steaming

Place fish in a colander, in a metal basket with legs, or in cheese-cloth.

Put 1½ to 2 inches of water in kettle. When it boils, add the fish.

Steam for 15 minutes per pound or until the fish flakes easily.

Place on a heated platter, add salt, and serve with a sauce or garnish.

### **Quick New England Fish Chowder**

Cut a ½-pound fillet in about 1-inch cubes.

Fry 2 teaspoons of diced salt pork until crisp and golden brown.

Add ¼ cup chopped or sliced onions and brown slightly.

Add 1½ cups of hot water and 1½ cups of diced potatoes, and cook 10 minutes or until the potatoes are partially tender.

Add the fish, turn the heat to simmer, and cook until the fish can be flaked easily when tested with a fork.

Add 1½ cups of milk, and salt and pepper; and heat.

Serve immediately with chopped parsley sprinkled over the top. Serves 3 or 4.

## **BAKING**

Whole fish, fillets, or steaks may be baked. Whole fish may be baked stuffed, and fillets may be baked with the dressing separate.

Fat fish such as mackerel are best for baking whole, as the fish cooks in its own fat and requires no basting. Also, the skin stretches without cracking.

When baking lean fish, score the skin a few times and insert slices of salt pork. Or, rub it with melted butter and keep it well basted while cooking.

### **Baking**

Cut a pound of fish fillets or steaks into serving portions.

Sprinkle both sides with salt and pepper. Add 1 tablespoon of lemon juice and 1 teaspoon of grated onion to 2 tablespoons of butter or other melted fat.

Dip each piece of fish into the mixture and place in a greased baking pan. Pour the rest of the fat over the fish.

Bake in a moderate oven at 350 degrees F. for about 25 to 30 minutes, or until the fish flakes easily when tested with a fork.

Sprinkle with paprika and serve immediately on a hot platter. Serves 3 or 4.

### **Baking Stuffed Fish**

Clean, wash and dry 2 pounds of dressed fish. Sprinkle inside and out with salt.

Stuff the fish loosely with bread stuffing and sew the opening with needle and string or close with skewers.

Place the fish in a greased pan. Brush with melted fat.

Bake in a moderate oven at 350 degrees F. for 40 to 60 minutes, or until the fish flakes easily when tested with a fork.

If the fish seems dry while baking, baste occasionally with dripping or melted fat.

Remove string or skewers and serve immediately on a hot platter, either plain or with a sauce. Serves 3 or 4.

## **BROILING AND FRYING**

For broiling, fillets or steaks are preferred. Small fish may be broiled whole. Larger fish should be split and the backbone removed.

Fish may be fried either in deep fat or by pan-frying or sauteing. Pan-frying or sauteing (cooking the fish in a pan with just enough fat or oil to keep it from sticking) is a good method for small fish, fillets, or steaks that are about a half-inch thick.

Deep fat frying (cooking in enough fat to cover the fish completely) is a good method for cooking small fish, fishcakes, croquettes, shellfish such as oysters and clams, shrimp or scallops.

### **Getting Fish Ready To Broil Or Fry**

Use fish fillets, steaks, or small flat dressed fish.

Wipe the fish with a damp cloth.

Salt on both sides.

For **broiling**, brush with melted fat, unless the fish is a fat variety. For **frying**, dip in milk or in a mixture of 1 egg and  $\frac{1}{2}$  cup milk, and then into a mixture of  $\frac{1}{4}$  cup flour and  $\frac{1}{4}$  cup cracker meal.

Broil or fry, using one of the following methods:

### **Broiling**

Put the fish on a greased broiler rack, skin side down.

Place in a broiler with the pan about two inches from the source of heat. Brush with melted fat and broil for 5 to 8 minutes or until slightly brown. Turn the fish over, brush with melted fat and broil 5 to 8 minutes.

### **Pan Frying**

Heat a frying pan containing a small amount of fat. Place the fish in the pan carefully.

Fry until a golden brown. Keep the heat moderate. Turn and brown the other side.

Serve on a heated platter with lemon wedges or a sauce.

### **Deep Fat Frying**

Cut 1 pound of fillets, steaks, or pan-dressed fish into serving-size portions.

Sprinkle both sides with salt and pepper.

Beat 1 egg slightly and blend in 2 teaspoons of milk or water.

Dip the fish in the egg and roll in  $\frac{1}{2}$  cup of bread crumbs, cracker crumbs, cornmeal, or flour.

Use a deep kettle with a frying basket and enough fat to cover the fish, but do not have the kettle more than half full of fat. Heat the fat to 350 degrees F.

Place a layer of fish in the frying basket and cook to an even golden brown, about 3 to 5 minutes.

Raise the basket, remove the fish, and drain on a paper towel.

Serve immediately on a hot platter, plain or with a sauce. Serves 3 or 4.

## **COOKING SHELLFISH**

### **Shrimp Cocktail**

Wash 1 pound of shrimp and place in 1 quart of rapidly-boiling water, salted with 3 tablespoons of salt.

Cover and bring to a boil. Simmer 5 minutes.

Drain, peel, and remove sand vein. Chill.

Place shrimp in lettuce cup in cocktail glasses with 1 tablespoon of cocktail sauce in center.

Serves 3 or 4.

### **Hard-Shell Clam Pie**

Remove black section from stomachs of 2 cups of shucked clams. Chop hard part finely.

Combine with  $\frac{1}{4}$  cup clam liquid, 4 tablespoons of butter, 1 beaten egg, 1 cup milk,  $\frac{2}{3}$  cup cracker crumbs, salt and pepper.

Pour into a deep pie shell. Cover with upper crust and bake in hot oven, reducing the heat after the first ten minutes.

Bake slowly 1 hour. Serves 3 or 4.

### **Oyster Stew**

Strain 1 pint of oysters, keeping the liquid.

Heat oysters slowly in 3 tablespoons of butter or margarine until their edges begin to curl.

Add the oyster liquid and then add 3 cups of hot milk.

Season and serve with a garnish of chopped parsley, finely chopped celery leaves, tips of green onions, or paprika. Makes 3 large or 4 medium servings.

### **Scalloped Oysters**

Mix  $\frac{1}{2}$  cup bread crumbs and  $\frac{1}{2}$  cup cracker crumbs with  $\frac{1}{2}$  cup melted butter or margarine.

Put  $\frac{1}{3}$  of the crumbs in the bottom of a shallow oiled baking dish.

Cover the oysters and sprinkle with salt and pepper.

Add 2 tablespoons of oyster liquid and 1 tablespoon of milk or cream. Repeat.

Cover with the remaining crumbs. Have only 2 layers to be sure that all the oysters are properly done. Bake 30 minutes at 400 degrees F. Makes 3 large or 4 medium servings.

## **ADDING CONTRAST IN COLOR AND FLAVOR**

Serve fish in ways in which it makes an appealing colorful dish and provides contrasts in flavor.

**Contrast** can be obtained by serving fish with crisp vegetables that have color, such as beets, red cabbage, tomatoes, cucumbers, or broccoli.

**Use garnishes** such as sliced lemon or orange, parsley, sliced tomatoes, watercress, radishes, cucumbers, sliced hard-cooked eggs, sliced pickled beets, sliced or chopped pickled cucumbers, stuffed olives, or paprika.

**Relishes and green salads** with dressings provide good flavor contrasts. Acid flavors combine well with fish, especially fat fish. That's why lemon is so popular with fish unless a thick sauce is served.

**Sauces** add much to the taste of fish. Use sauces such as Hollandaise, tartar, creole, cucumber, lemon, egg, Spanish, and mushroom.

**Spices** that go well with fish dishes include basil, bay, marjoram, parsley, saffron, savory, tarragon, and thyme.

## SEASONALITY OF SUPPLY

Following is an indication of the months of largest supply for important North Carolina varieties of fish, based on data on landings at North Carolina ports.

SPECIES—FINFISH	SEASON	LARGEST SUPPLY
Alewives	December - May	April
Bluefish	April - November	May, August, Sept., October
Catfish & Bullheads	January - December	March, April, October, November
Croaker	January - December	January, February, October, November, December
Flounder	January - December	January, March, October, November, December
King Whiting	January - December	January, February, April, November, December
Sea Bass	January - April November, December	February, March November, December
Trout—(Gray)	January - December	January, February, November, December
Trout—(Spotted)	July - December	September, October, November
Shad	January - May	February, March, April
Spanish Mackerel	May - October	June, July, August
Spot	April - November	July, September, October
Swordfish	December	December
Mullet	January - December	January, February September, October
<b>SPECIES—SHELLFISH</b>		
Crabs (Hard)	January - December	June, July, August
Crabs (Soft & Peeler)	April - September	April, June, July
Shrimp	May - December	July, August, September
Clams	January - December	March, April, May
Oysters	January - March October - December	January, February November, December
Scallops	December - May	January, February, March, December
Squid	March, July, August, October - December	March, November, December

## REFERENCES

**Extension Service, University of Massachusetts,  
Amherst, Massachusetts.**

Extension Leaflet 296, **Freezing Fish and Shellfish**

**Bureau of Commercial Fisheries, Fish and Wildlife Service,  
United States Department of the Interior, Washington, D. C.**

### Test Kitchen Series

- Number 2, **Basic Fish Cookery**
- Number 3, **How To Cook Oysters**
- Number 4, **How To Cook Salmon**
- Number 6, **How To Cook Ocean Perch**
- Number 7, **How To Cook Shrimp**
- Number 8, **How To Cook Clams**
- Number 9, **How To Cook Halibut**
- Number 10, **How To Cook Crabs**
- Number 11, **How To Cook Lobsters**
- Number 12, **How To Cook Tuna**
- Number 13, **How To Cook Scallops**

### Circulars

- Number 20, **Fresh And Frozen Fish Buying Manual**
- Number 41, **Shrimp Tips From New Orleans**
- Number 60, **Take A Can Of Salmon**

**Agricultural Extension Service,  
N. C. State University at Raleigh**

**Circular 465—Seafood Cookery in North Carolina**



FOOD PROGRAM GUIDE FOR AIDES  
USE WITH LOW-INCOME FAMILIES

7 Point Program

1. Know the food situation
2. Pin point food problems
3. Choose problem (s) to work on
4. Set objectives
5. Make plans to reach objectives
6. Carry out plans
7. Evaluate (Before, during, and after)

In developing Food Programs with the Low-Income families the Teacher Aides must search hard to find a starting point. She must begin where the people are, that is, with what the people presently know and understand, their past experiences, interest, the foods they have on hand and what they have to work with. As she teaches she must constantly look and listen for change. (What is happening.)

Better eating for these families comes not only from management of the food dollar, but also by helping families see and use all available resources - time, energy, skill in planning, producing and/or buying, conserving, storing, and preparing food. Equipment and space for food storage and preparation is also to be considered. Families vary in the amount of each resource and in the importance they place on each.

This leaflet is designed to serve as a guide to help Teacher Aides use family resources in developing sound Food Programs.

<u>FOODS WE NEED DAILY</u>	<u>AMOUNT NEEDED - CUPS</u>	<u>WHY</u>
1. Milk	Children - 3 to 4 Teen-agers - 4 or more Adults - 2 or more Pregnant Women - 4 or more Nursing Mothers - 6 or more	Keep Nerves, Muscles and Heart in Working Order. Builds Boones, Teeth, Youthfulness; prevents Fatigue; Helps Blood Clots.
2. Meat	2 or more servings	Builds: Red Blood, Muscles, Heart; Fights Germs.
3. Vegetables & Fruits	4 or more 1/2 cup servings	
a. Vitamin A	1 serving of <u>good</u> source	Provides Better Eye Sight; Growth and Pep, Moist, Smooth Skin.
b. Vitamin C	1 serving of <u>good</u> source	Aid in Healing Wounds; Healthy Gums, Cements Body Cells.
c. Others	2 or more servings	Help Other Food Groups.
4. Enriched Bread and Cereals	1 serving - 1 cup prepared 1/2 cup cooked cereal 1 piece bread	Energy, Nerves, Less Fatigue.

FOODS WE NEED TO EAT AND WHY? --WHAT SHOULD BE--

"WHERE ARE WE?"

Milk

---

Meat

---

Fruits & Vegetables

1. Green & Yellow
  2. Vitamin C
  3. Other
- 

Enriched Breads and  
Cereals

---

Cooking Equipment

---

HOW WELL DO WE EAT? --WHAT IS--

CLASSIFICATION OF PROBLEM AREAS:

Step I

What is the Greatest Need?

Check One of the Following  
Is It --

Milk

Meat

Fruits & Vegetables

Vitamin A

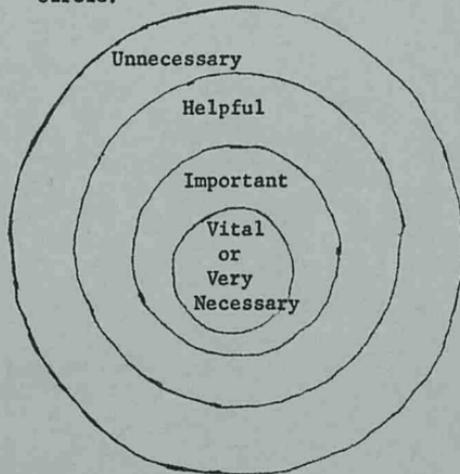
Vitamin C

Other

Enriched Breads and Cereals

Step II

Check Where this Need Falls in this  
Circle:



PIN POINT FOOD PROBLEM (S).

The difference between What Is and What Should Be.

State Objectives and goals in terms of Change in Attitude, Knowledge or Skills related to increased consumption in Food or Food Group Selected as the problem (s). Name people to be reached in objectives and/or goal (s).

Objectives:

Goal for 1969-70

<u>Check Only One</u>	Name Specific	Objective	Learner Activity And Method Used	When Specific Date	Plan of Evaluation
Food Problem	Family Or Group				
<input type="checkbox"/> Milk					
<input type="checkbox"/> Meat					
<input type="checkbox"/> Fruits & Veg- etables <input type="checkbox"/> Vitamin A <input type="checkbox"/> Vitamin C <input type="checkbox"/> Others					
<input type="checkbox"/> Breads and Cereals					

PLAN TO REACH GOALS

Prepare Check Sheet to Evaluate (Before, During and After with Specific Family or Group.) (See Suggested Food Use Progress Sheet pp.6-7 USDA - )

WORK SHEET ON FAMILY NEEDS

Check Your Greatest Need	Family or Group	No. Adults	Amt. Needed	No. Children	Amt. Needed	Total one (1) Week	How Will We Get It?		
							Produce	Buy	Other
<input type="checkbox"/> Milk									
Total Needs									
<input type="checkbox"/> Meat									
Total Needs									
<input type="checkbox"/> Fruits & Vegetables									
<input type="checkbox"/> Vitamin A									
<input type="checkbox"/> Vitamin C									
<input type="checkbox"/> Other									
Total Needs									
<input type="checkbox"/> Enriched Bread and Cereals									
Total Needs									

AUDIENCES TO BE REACHED -- THEIR NEEDS

hen and With Whom? (Start back to Situation) -- What Is -- Where Are They Now?

WHAT NEXT -- WHERE DO WE GO FROM HERE?

Prepared by:  
Bessie B. Ramseur  
Ext. Home Ec. Spec.  
July, 1968

## FOR HOME ECONOMICS AGENTS

### HOW TO USE PROGRAM GUIDE

1. Home Economics Agent discuss 7 Point Program with Aide's Supervisors, Aides and other interested agencies.
2. Read and discuss introduction.
3. "Foods We Need to Eat - Why". A brief resume of background information previously taught Aides. "What Should Be". Foods we need to eat everyday and why.
4. "How Well Do We Eat?" Information Aides have secured from a specific family or families finding out "What Is" - What are the people eating now.
5. Pin pointing the difference between "What Is" and "What Should Be". This is the problem.
6. "Objectives and Goals for Specific Families". Where we hope to take the families and when - How much time will it take?
7. "Plan to Reach Goals". What Foods? Who? Where? How? and When? Evaluate each step. Agents assist in developing Check Sheets.
8. "Work Sheet on Family Needs". Suggested plan to determine family's food needs for one week.
9. How far have we gone toward our objective and/or goals? What changes have families made, and where do we go from here? Use suggested Food Use Progress Report.

SAMPLE LESSON PLANS FOR MILK

Subject: "Milk for a Snack"

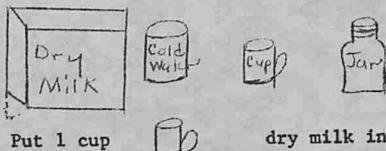
Need: 1. Everyone needs milk - Why? (Check "Foods We Need to Eat")  
2. 1 out of every 2 in X County does not drink milk.

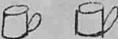
Purposes: 1. To develop Aide's skill in conducting a method demonstration.  
2. To develop people's appreciation for need of milk in the diet to the end that they will consume more milk.

Discuss: Why milk is needed. (Can be done during demonstration)  
See "Milk Food We Need to Eat - Why"

Demonstrations: Prepare the following Milk Dishes (Prepare only one at a time).

I. To make liquid milk from instant dry milk you will need



Add 2 cups cold water, 

Put lid  on the jar and shake. 

When there are no lumps fill jar full of water - Chill and serve.

Assignment: Make a quart of milk from powdered milk. Chill and serve your family.

Demonstration: II. Continuation of Getting More Milk in the Diet.

Cream of Bean Soup (12 servings)

3 cups dried beans  
1/2 cup onions chopped

4 tablespoons margarine  
2 cups non-fat dry milk with  
8 cups of water

Salt to taste.

Cream of Bean Soup (continued)

1. Cook beans ahead of time.
2. Add onions to beans a little before they are tender
3. Add milk and butter
4. Heat and serve.

Assignment: Have participants prepare and serve "Cream of Bean Soup".

Demonstration: III. For Getting More Milk and/or Vegetables in the Diet.  
Discuss why behind each during demonstration.

Lentil and Cabbage Soup (6 servings)

2 medium-sized carrots (sliced)	2 cups <u>cooked</u> dry beans or lentils
1/4 cup chopped celery	1 cup finely chopped cabbage
1 small onion, chopped	salt & pepper
3 cups meat stock or 1/4 lb of fat back.	2 cups non-fat dry milk

1. Cook fat back in water with lentil or dry beans until tender.
2. Cook carrots, celery and onion in stock or fat back until almost tender (about 15 minutes)
3. Add beans or lentils and cabbage
4. Cook 5 minutes more.
5. Add non-fat dry milk, heat and serve.

Assignment: 1. Families add lentils to their shopping list  
2. Families prepare and serve Lentil and Cabbage soup to their families.

SAMPLE LESSON PLAN FOR GETTING MORE MEAT IN THE DIET

Subject: "Stuffed Picnic Rolls "

Need: One out of every 10 persons in X community did not receive a serving of protein food (meat or meat alternate) daily.

Purposes: 1. To further develop Aide's skill in conducting method demonstrations.  
2. People with whom Aides work appreciate a simple inexpensive meat dish.

Discuss: Why meat and meat like foods are needed. (See "Meat Foods We Need to Eat - Why".)

Demonstrate: Stuffed Picnic Rolls

1 lb. ground beef	1 teaspoon salt
1/4 cup chopped onion	Prepared mustard
1/3 cup tomato catsup	8-12 hot dog rolls or biscuits
1/4 lb. cheese, shredded	

1. Cook beef and onion in a skillet until meat has lost its red color and onions are soft.
2. Remove from heat and add the catsup, shredded cheese and salt.
3. Stir until well blended.
4. Split rolls or biscuits and spread one side with mustard.
5. Fill with meat mixture.
6. Serve while hot at the picnic spot. (under a tree, in backyard, etc.).

Assignment: Have participants plan and serve a picnic meal including the "Stuffed Picnic Roll".

Have participants use picnic rolls in other meals.

SAMPLE LESSON PLAN FOR  
GETTING MORE VEGETABLES IN THE DIET

- Subject: "Good Vegetable Dinners"
- Need:
1. We need to eat four servings of vegetables and fruits everyday.
  2. \_\_\_\_\_ out of every \_\_\_\_\_ families in \_\_\_\_\_ County or community do not eat enough vegetables.
  3. Families do not know the food value of vegetables.
- Purpose:
1. To get \_\_\_\_\_ families in \_\_\_\_\_ County or community to eat vegetables.
  2. To show \_\_\_\_\_ how to cook vegetables to save food value.
- Discuss:
1. Show chart of foods needed daily.
  2. Point out vegetable-fruit group. How many could we grow in our gardens? -- Carrots, turnip greens, cabbage, corn, green pepper, beets, tomatoes, squash, etc.
  3. We need these foods for eyes, gums, dry skin, lack of pep, etc.
  4. Let us name some other fruits and vegetables we need to buy: Oranges, grapefruit, lemons and bananas.
  5. Cut pictures of cooked and raw vegetables needed to complete a vegetable dinner.
- Demonstration: Prepare one or more vegetables
1. Wash quickly
  2. Start green vegetables cooking in small amount of water.
  3. Cook quickly - short amount of time - until tender - add fat.
  4. Show cooked vegetables to club members.
- Assignment: We would like for each of you to cook two vegetables this way, then show your neighbor how.

Materials Needed:

Fat  
Vegetables  
Salt

Equipment Needed

1 bowl - to wash vegetables  
1 saucepan - to cook vegetables  
1 set measuring spoons - to measure salt and fat  
1 measuring cup - to measure water  
1 cereal bowl - to show finished product  
  
1 tablespoon  
1 knife

SAMPLE LESSON FOR ENRICHED BREAD & CEREAL GROUP

Subject: "Better Quality and Variety in Breads and Cereals"

Need: We need to eat four or more servings of Enriched Breads and Cereals daily.

Purposes:

1. Aides to develop an appreciation for enriched corn meal in the diet.
2. Aides to increase knowledge of a variety of ways to use enriched corn meal.
3. Aides to develop skill in preparing better quality breads.

Discuss: Exactly what is added to enrich corn meal.  
The three B vitamins - Thiamine or B<sub>1</sub>, Riboflavin or B<sub>2</sub>, and Niacin, the food mineral, iron and sometimes calcium.  
(See Foods We Eat and Why) Enriched Bread & Cereal Group.

Demonstration I: Corn Meal Mix

4 cups flour	1/4 cup baking powder
4 cups enriched corn meal	1 tablespoon salt
1 - 1/2 cups non-fat dry milk	1 - 1/2 cups shortening

Stir dry ingredients together until mixed. Cut in fat until well blended. Place in a glass jar or tin can. Keep tightly closed in a cool place. Use the mix within a month. Makes 12 cups.

Demonstration II: Corn Bread (Using Corn Meal Mix)

4 - 1/2 cups corn meal mix	1 - 1/3 cup water
2 eggs beaten ( or 5 tablespoons sifted dried egg mixed with 5 tablespoons water).	

Combine all ingredients and stir just enough to moisten dry ingredients. Pour into greased pan about 8 inches square. Bake at 425 degrees F. about 25 minutes.

Demonstration III: Enriched Corn Meal Drop Biscuits (Using Corn Meal Mix)

2 cups Corn Meal Mix	about 1/2 cup water
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Add water to the dry mix to make a soft dough. Drop by tablespoonfuls onto a greased baking sheet. Bake at 425 degrees F. (hot oven) 12 minutes. Makes 12 biscuits.

SAMPLE LESSON FOR ENRICHED BREAD & CEREAL GROUP

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- Need: We need to eat four or more servings of Enriched Breads and Cereals daily.
- Purposes:
1. Aides to develop an appreciation for enriched corn meal in the diet.
  2. Aides to increase knowledge of a variety of ways to use enriched corn meal.
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Demonstration III: Enriched Corn Meal Drop Biscuits (Using Corn Meal Mix)

2 cups Corn Meal Mix                      about 1/2 cup water

Add water to the dry mix to make a soft dough. Drop by tablespoonfuls onto a greased baking sheet. Bake at 425 degrees F. (hot oven) 12 minutes. Makes 12 biscuits.

Demonstration IV: Spoon Bread

1 cup enriched corn meal	2 cups water
1 1/2 teaspoons salt	2 eggs
1 tablespoon fat	1 cup milk

Mix water with corn meal, salt, and fat in a saucepan and heat to the boiling point, stirring constantly. Cook 5 minutes to a thick mush. Beat eggs well and add to mush. Add milk to make a thin batter. Beat well, pour into a greased baking pan or dish and bake in a moderate oven (350 degrees- 370 degrees f) for 30 minutes. Serve at once.

Demonstration V: Corn Dodger

2 cups corn meal	1 3/4 cups boiling water
1 teaspoon salt	2 tablespoons fat

Mix salt with corn meal. Add boiling water. Mix well. Add melted fat. Shape into small flat cakes and bake on a well - greased griddle.

Assignment: Aides prepare bread two different ways using enriched Corn Meal.

SAMPLE LESSON PLAN FOR LIMITED EQUIPMENT  
(Keeping food problems in mind)

Subject: "Skillet Dinner"

Need: 85% of the families Aides work with in X County used frying pans for cooking main dishes usually meats. 90% ate no green or yellow vegetable nor potatoes.

Purpose: To help Aides develop skill in preparing one dish meals.

Discuss: Time saving meals with limited equipment.  
Why behind eating foods in "Skillet Dinner". (See Foods We Eat and - Why?)

Demonstrate: Skillet Dinner ( 8 servings)

Mix in a 2 1/2 qt. bowl (1 - 1/2 cups soft Bread Crumbs  
and let stand until soaked. . . .(1/2 cup Water

(1 slightly beaten Egg  
(1/2 cup Instant dry milk  
Add and mix well. . . . .(1 - 1/2 teaspoon Salt  
(1/8 teaspoon Pepper  
(1 lb. Ground Beef

With wet hands, shape into  
16 to 20 meatballs and roll  
in. . . . .(3 Tablespoons Flour

In a 10-inch skillet,  
brown the meatballs in . . . .(2 Tablespoons hot Shortening

Add and cook slowly  
about 5 minutes . . . . .(1 cup sliced Onions

Drain and save liquid from. . . .(1 lb. can Green Beans

(Liquid drained from Green Beans  
Add to mixture (2 cups finely cut Potatoes  
in skillet and (2 cups diced carrots  
bring to a boil . . . . .(1/4 cup Water  
(1 teaspoon Salt  
(few grains Pepper

Cover and cook slowly about 15 minutes, or until potatoes and carrots are tender. Add green beans and heat thoroughly. Serve hot.

Assignment: 1. Demonstrate the "Skillet Dinner" to at least 10 families.  
2. Have families prepare the "Skillet Dinner".

SAMPLE LESSON FOR MEAL PLANNING UNIT

Subject: "Planning Family Meals at Low Cost"

Need: 95% of families that  X  Aides work with do not plan meals.

Purpose: Low-income families develop some knowledge of meal planning, buying and storage of food.

Discuss: The way we begin planning meals.

1. Let's take a look at the foods we need to eat everyday. (Use a Guide to Good Eating)
2. List foods we have on hand:

_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Check recipes and plan some meals.
  - a. Start with the main dish (meat group)
  - b. Select foods from other group that go well with the main dish.
  - c. Check meals to see if total needs of family are met.
4. Now let's make a shopping list of other foods we need to have good meals.

_____	_____	_____
_____	_____	_____
_____	_____	_____

5. WHEN SHOPPING--  
Read the labels to find out what's in the containers. Compare prices of fresh, frozen, canned and packaged foods to see which ones gives the most servings for the least money.
6. Buy food that is in good condition -- firm, fresh vegetables and fruit. Be sure meat, milk, butter margarine, fish, cheese and eggs are refrigerated.
7. Store food properly to keep until ready for use.

- Assignment:
1. Be sure to let other members of the family share in planning, preparing and serving meals.
  2. Keep a record of what is spent for food.
  3. List difficulties you had with this assignment and ask your Aides to help you.

SUGGESTED FOOD USE SHEET-PROGRESS

Use this form to record progress of families. Have one of these for each family you work with. After each visit, fill in as many items as you can.

PROGRESS on \_\_\_\_\_ Family  
\_\_\_\_\_ Address

I observed this about the family's  
use of breads and cereals:

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The family made these changes in their  
use of breads and cereals:

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I observed this about the family's  
use of meats, poultry, fish, eggs,  
dried beans, peas, and peanut  
butter:

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The family made these changes in their  
use of meats, poultry, fish, eggs, dried  
beans, peas, and peanut butter:

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Changes the family has made in food shopping:

Changes the family has made in food storage:

Changes the family has made in kind of foods served at meals:

Changes the family has made in serving food. Does the family eat together?

AGRICULTURAL EXTENSION SERVICE  
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

HOME ECONOMICS  
FOODS AND NUTRITION  
Box 5097 Zip 27607

September 1, 1968

TO: Home Economics Extension Agents working with  
"Consumer Competence in Foods and Nutrition"

FROM: Charlene K. Brelsford, Extension Foods Specialist

SUBJECT: Adaptation of handbook, "Consumer Competence in  
Foods and Nutrition", for a self-study course.

Information in the handbook can be duplicated and used as self-study lesson material for young homemakers. An evaluation device for each lesson is included in the handbook. In addition, a sample assignment for each lesson is enclosed.

The suggestions, included in "A Procedure For Using Self-Study Courses", which were sent to you in January, 1968, apply to this program.

*Charlene K. Brelsford*



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS. NORTH CAROLINA STATE UNIVERSITY AT RALEIGH, 100 COUNTIES AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING

Possible Assignment for Lesson 1  
"Management And Your Food"

1. Keep a record of the money you spend for food eaten at home for one week. Remember to check off non-food items on the grocery tape and deduct cost of these items. Also keep a record for the same week of the amount spent by family members for food eaten away from home.

\$ \_\_\_\_\_ (food)                      \$ \_\_\_\_\_ (non-food)

What percent did you spend for non-food items? (Divide cost of non-food items by total grocery bill.) \_\_\_\_\_

In one study, the amount spent for non-food items averaged about 20 percent.

\$ \_\_\_\_\_ (food away from home)

2. Compare cost of your family's food with enclosed paper on "Cost of Food At Home". If your costs were much higher than the plan (low, moderate, liberal) you desire, why do you think this is so?

3. List three suggestions for keeping the family food bill at a reasonable level.

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4. Keep a record of the amount of time you spend on food preparation during one day.

\_\_\_\_\_ (time)                      \_\_\_\_\_ (day of week)

What suggestions do you have for decreasing the amount of time spent in food preparation?

5. Compare the cost of a convenience food with cost of ingredients in its home-made counterpart. Keep a record of the amount of time spent in preparation of each product.

(Over)

Name of product \_\_\_\_\_

<u>Convenience Food</u>		<u>Homemade</u>	
Cost	\$ _____	<u>Ingredient and</u>	<u>Cost of</u>
Cost of any added ingredients	_____	<u>Amount Used</u>	<u>Amount Used</u>
Total	\$ _____	_____	\$ _____
Number of servings	_____	_____	_____
Cost per serving	\$ _____	_____	_____
Time spent	_____	_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		Total	\$ _____
		Number of servings	_____
		Cost per serving	\$ _____
		Time spent	_____

(Technically, costs of cooking should be added. However, cooking costs are frequently negligible and often, as with cakes, a mix must be cooked about the same length of time as a homemade product.)

Which product would you choose considering cost, time and quality of product?

Suggested enclosure:

"Costs of Food At Home" from Family Economics Review

Possible Assignment for Lesson 2  
"Food Planning and Shopping"

1. Write a lunch menu that is typical of the type that most members of your family eat. Then write a breakfast and dinner menu for your family that would complete the day's meals.

BREAKFAST

TYPICAL  
LUNCH

DINNER

2. Prepare and serve the above breakfast and dinner at some time this week.  
a. Was your family satisfied with the meals? (Explain)

- b. Did the 3 meals fulfill nutritional requirements for your family?  
(Check meals against "Foods for Fitness, A Daily Food Guide".)

If there were shortages, list them.

Were any snacks eaten by family members? If so, what food was eaten?

3. List the cost of one food item at regular price and at "special" price as recently advertised by a local store.

Item \_\_\_\_\_ Regular price \_\_\_\_\_  
Special price \_\_\_\_\_

Would it be wise for you to stock up on this item when on sale? (Explain)

4. Choose any 2 of the following motivational materials and techniques used to motivate us to buy in the grocery store, and tell of the effect they have on you.

- (1) Placement of goods at eye-level
- (2) Displays in the center of the aisle
- (3) Special displays

(Over)

- (4) Bargain counters
- (5) Packaging - designs, shapes, and colors
- (6) Advertising - cents-off and other
- (7) Premiums, stamps, games
- (8) The store - layout, colors, music
- (9) Demonstrations and samples

5. List the "store brands" of canned goods stocked by the grocery store where you usually shop.

What determines the brand or brands of canned goods you buy?

Suggested enclosure:  
"Food for Fitness, A Daily Food Guide"

Possible Assignment for Lesson 3  
"Consumer Food Protection"

1. Enclose a canned food label on which you have circled information required by the Federal Government.
2. Have you had a poor experience with a food product? If so, tell about it, tell what you did and why.  
(Trying a product once and not buying again because of lack of preference should not be included as a poor experience.)
3. List one law pertaining to food.
4. All food additives must be safe. Do you use iodized salt? \_\_\_\_\_  
(Explain)

Possible Assignment for Lesson 4  
"Our National Food Supply"

1. Choose 2 well-packaged products and tell what you like about the packaging.
2. What new features would you like to see in packaging?
3. In January, 1968, the Consumer Price Index for "all items" was 118.6. What years form the basis period of 100 to which the current figures are compared?

Possible Assignment for Lesson 5  
"Buying Guides"

1. List 3 foods that are now "in season" and are being advertised. Give the source of the advertisements.
  
2. What USDA grades of beef are carried by the grocery store where you usually shop?
  
3. Did you purchase any of the lower cost foods from the "basic four food groups" this week? What were these purchases?
  
4. Describe the characteristics to look for in buying:
  - a. Lettuce
  
  - b. Fresh potatoes
  
  - c. Eggs
  
  - d. Fresh grapefruit
  
  - e. Cantaloupe
  
5. On your next grocery shopping trip, observe the shoppers. Tell about one good shopping practice you observed.

Did you see any poor practices? \_\_\_\_\_  
If so, tell about these.

Suggested enclosures: "Beef and Veal in Family Meals, A Guide for Consumers," HG 118; "How to Buy Fresh Fruits," HG 141, "How to Buy Fresh Vegetables" HG 143; "How to Buy Eggs", HG 144 or "Eggs in Family Meals, A Guide for Consumers", HG 103.

September 1, 1968

TO: Home Economics Extension Agents  
FROM: Mrs. Marjorie M. Donnelly  
RE: Television Sketches

The following suggested sketches for television are based on materials in Consumer Competence in Foods and Nutrition by Charlene K. Brelsford.

These points have been considered:

1. They may be used individually or in series.
2. They are geared toward 10 minute presentations, but may be expanded or shortened.
3. They can be easily adapted to radio.
4. They involve the homemaker to some degree.
5. There is a single focus for each program.
6. There is much opportunity for individual creativity on the part of the agent.
7. Requests received -- either for information or handouts offered -- will give you some means of evaluation. The population reached by your television station (or radio station) and the number represented by a single request can be ascertained by asking the station personnel.

## Management and Your Food -- Part I

**Objective:** To help the audience gain some knowledge of home management as it relates to feeding a family.

### Visual

### Script

We often hear someone referred to as "She's a good manager". What does this mean? Probably the person referred to as one who makes good use of what she has. She makes wise decisions as to how to use her resources to meet her family's needs and attain many of their wants and goals.

Each of us has resources -- some more than others. Money is not our only resource, though some people think only of money when the term is used.

Some of our resources are:

Flip Cards

Money	Knowledge
Time	Interest
Energy	Materials
Skills and Abilities	Community facilities

Show product -- cost and time to make.

We can substitute one of these resources for another. This may be based on necessity or preference. For example: Money for time and perhaps skill -- as shown in three types chocolate pudding.

Again show products.

A skilled baker may prefer reading a good book to making yeast rolls or muffins.

Again show products.

A person with time and energy may prefer to grow his own tomatoes rather than purchase them.

We might say how we use our resources depends on what's important to us. One person would eat hamburger and pay for the television; another would eat steak but plan to carry less insurance, and on it goes.

We are not here to pass judgment, but to urge you to remember these points:

Cards --

- (1) Decide what's important to your family.  
(This means the family as a whole needs to participate.)
- (2) Income, in a sense, consists of both money and non-money resources.
- (3) Resources should not be wasted.

Visual

Script

This is the first step in being a good manager, and this is the first of a 2 part series on Management and Your Food. I'll be back with you           . Meanwhile, if we can help, call your County Extension Office.

M. M. Donnelly  
8/68

## Management and Your Food -- Part II

Objective: (Same as Lesson I)

### Visual

PLAN AHEAD

### Script

Probably all of you have seen this silly sign, and yet it isn't silly. What happened to the printer often happens to us -- particularly in the area of food.

If you are a good manager, you plan! Ask yourself honestly what needs to be done in order to make wise choices when selecting and buying food for the family. You will find you need to.

### Flip Cards

Plan menus which:

1. Meet needs
2. Consider resources
3. Are acceptable
4. Consider "total" eating.

OR

### Pictures to illustrate

Such as various ages  
in group or party  
setting.

- (A) Plan menus which:
- (1) Meet needs of all family members.
  - (2) Consider time, energy, skill etc. available.
  - (3) Are acceptable to the "eaters".
  - (4) Take into account meals eaten away from home and amount of entertaining planned, snacking done.
- (B) Prepare a shopping list.

Planning is important, but it isn't the whole story. We also need to know whether our planning paid dividends, or whether we planned well.

If you can't answer yes to the following four questions, you need to work harder.

Could use these  
on cards if cards  
not used under  
Planning.

- Was there a good balance of time, energy, skill and money? (Did you stretch your dollar to meet needs, but without feeling exhausted from too much kitchen work?)  
Did family members get what they need?  
Did family and guests enjoy their meals?  
Did I stay within my food budget?

There are guides listing the quantities of food needed per week to supply necessary nutrients. There are estimated costs at different income levels. If you need help, contact your County Home Economics Agent,

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The Cart Before the Meal or  
The Meal Before the Cart!

Objective: To help homemakers see the value of planning before shopping.

Visual

Illustrate with 5 bags -- or one bag with 1/5 cost on non-food items-- or giant grocery tape with non-food items checked.

Show meal pattern and illustrate shifts within a group such as green or yellow vegetables for flexibility.

Summarize on cards or illustrate one or two.

Script

Do you live on a budget? If your answer is "No", then my next question is "Do you know how much you spend for food each week?" Did you count what was spent on meals and snacks away from home?

A budget is a plan for spending. When the average family spends approximately 18% of its income for food, it warrants planning. Most of us don't stop to realize that a fifth of what we spend in the grocery store is not for food.

For good nutrition at reasonable cost, we need to organize for better meals as well as for spending. Herein lies the question of whether we put the cart before the meal or the meal before the cart?

For the most part, we say put the meal before the cart!

One reason is

A plan or menu patterns allow for adequacy of the 4 food groups --

- (a) Keep it flexible
- (b) Remember snacks can count for good nutrition
- (c) Foods go together better and you don't waste time trying to decide "what's for dinner?"

Other factors will need to be considered such as number to be served, equipment available, skill of the cook, etc.

Another reason is that important shopping list.

- (a) can be organized by store layout for speed.
- (b) staples listed ahead are not forgotten
- (c) recipes can be checked for amounts. (In prepackaged, ask for what you want or need.)
- (d) not tempted to buy impulsively.
- (e) eliminates "extra" trips to store.

There are many reasons for putting the "meal before the cart". See if you can add others. And, don't forget, if you need help, call your Extension Home Economics Agent \_\_\_\_\_.

## Penny Wise and Pound Foolish

**Objective:** To help homemakers take a look at shopping practices and/or gimmicks which may be costing more than they realize.

### Visual

### Script

I'm sure you have heard that old adage about being "penny wise and pound foolish". How often does it apply to you?

If you aren't careful, it can be applicable almost every trip you make to the grocery store. And, in this age of rising prices, can you afford to have this happen?

Each of us likes to feel we are "getting a bargain"! But when is a bargain a bargain? That's the question we need to think about for a few minutes, so let's take an imaginary trip to the grocery store.

Show very ripe fruit and wilted greens.

Let's go first to the fresh produce area and see if we find anything for quick clearance.

Will you have lost food value due to age and storage?

Show seasonal product.

Can you use the product before it spoils?

Is the special due to it's being in season and plentiful?

Is it in the amount your family can use without growing tired of it?

Use products.

At the breads and cakes area, we often find sales. If it's on sale, it may be a special; if it's "quick clearance" see if you can determine how old it is. A week old cake on sale for a few cents less may be costly in family satisfaction.

Product.

Anytime one sees a "Special", it's time to do some fast arithmetic. For example, soup that usually sells for 2/39¢ could go on special at 4/99¢ -- or an increase of 6¢ a can. This means the homemaker needs to be alert to prices.

Card --  
contents: beef,  
potatoes, carrots,  
broth.

In addition to prices, she must be alert to labels. For example, one for beef stew may read "contents: beef, potatoes, carrots, broth etc." another can, the same size, weight, and price, may read "contents: beef broth, potatoes, carrots, beef. Unless you read and know that contents are listed in descending order, you might pick can No. 2 and be very unhappy about the small portion of beef present.

Contents: beef  
broth, potatoes,  
carrots, beef.

Visual

Script

This is only a beginning. See how many additional tips you can think of which will help prevent home-makers from being penny wise and pound foolish. If you have good pointers to share, drop a card to me, \_\_\_\_\_ County Home Economics Agent, telling me about them.

M. M. Donnelly  
8/68

AGRICULTURAL EXTENSION SERVICE  
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

HOME ECONOMICS  
FOODS AND NUTRITION  
Box 5097 Zip 27607

September 1, 1968

TO: Home Economics Agents working with "Consumer  
Competence In Foods And Nutrition"

FROM: Charlene K. Brelsford, Foods Specialist *CB*

SUBJECT: Evaluation Summary

- I. Please complete and return the enclosed "General Evaluation", one form per county, before October 1, 1969.
- II. For each of the sections taught regarding "Consumer Competence In Foods And Nutrition", please send before October 1, 1969:

One copy per county of evaluation form reproduced from handbook; label it "post-evaluation".

If you used the evaluation form as a pre-test, send another copy labeled "pre-test".

At the top of the evaluation form, list:

- a. number of people participating, and
- b. number of people completing evaluation form

(You may or may not wish to give the evaluation form to all participants, however we encourage evaluation.)

More details regarding specific sections:

MANAGEMENT AND YOUR FOOD, page 1.6

List number and percentage of people answering each of questions 1 through 5 with a "yes". (For example, if 80 people completed the evaluation form and 60 answered question number 1 with a "yes", place 60 - 75% in the blank to the left of question number 1.)

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS. NORTH CAROLINA STATE UNIVERSITY AT RALEIGH, 100 COUNTIES AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING



For item number 6 - give number and percentage checking each part.  
For item number 7 - how many people answered each sub-question?  
Select and identify by letter the two sub-questions that were most frequently answered. Give a representative answer for these two.

FOOD PLANNING AND SHOPPING, page 2.7

List number and percentage of people answering each of items 1 through 6 with a "yes".

For item number 7 - how many people answered each sub-question?

Select and identify by letter the two sub-questions most frequently answered.

Give a representative answer for these two.

CONSUMER FOOD PROTECTION, page 3.5

List number and percentage of people answering each of items 1 through 7 correctly.

OUR NATIONAL FOOD SUPPLY, page 4.4

List number and percentage of people answering each of items 1 through 5 with a "yes".

Select and identify by number the two questions most frequently answered with "details" and give a representative answer for these two.

BUYING GUIDES, page 5.4

List number and percentage of people answering each of items 1 through 10 correctly.

You may develop and use other lesson evaluation forms if you wish. Feel free to add to or change the evaluation forms in "Consumer Competence In Foods And Nutrition". In any case, please send a copy including a county summary of the evaluation to the Foods and Nutrition Department.

Thank you.

General Evaluation of "Consumer Competence In Foods And Nutrition"

1. Which part of the handbook was most helpful?
2. Which part of the handbook was least helpful?
3. What sections did you teach?
4. Did you use any of the "ideas for teaching"?
5. Did you use any of the "references"?

Books, booklets, papers? \_\_\_\_\_

Films, filmstrips, slide sets? \_\_\_\_\_

6. If you used the materials (even if adapted) with any of the following, please indicate the number of people taught. Add "other" groups if you taught those who don't belong in the first four.

Number of people (Do not include the same people  
in more than one group.)

- a. Teenagers \_\_\_\_\_
- b. Low income \_\_\_\_\_
- c. Young homemakers \_\_\_\_\_
- d. The elderly \_\_\_\_\_
- e. Other (specify) \_\_\_\_\_  
\_\_\_\_\_

7. What topics would you suggest for future meetings with county people on consumer competence in foods and nutrition?
8. If you had a "success story" that might be of interest to others, please tell about it on the back of this paper.

Completed by \_\_\_\_\_  
Name

\_\_\_\_\_ Date completed

\_\_\_\_\_ Title

\_\_\_\_\_ County

Thank you for completing this form. Please mail it before October 1, 1969, to:

Specialist In Charge, Foods and Nutrition Department  
Agricultural Extension Service  
P.O. Box 5097  
N. C. State University  
Raleigh, North Carolina 27607

## Answers To Evaluation Questions In "Consumer Competence In Foods And Nutrition"

This does not include self-evaluation parts. In most cases, the wording can vary. Frequently, more information is provided below than is necessary to answer a question. There may be other acceptable answers to some questions.

### MANAGEMENT AND YOUR FOOD, page 1.6

#### 7. a. Answers on pages 1.1 and 1.2

Time, energy, knowledge, skills and abilities, interests, materials.  
Yes, there is a relationship between resources.  
(Sample explanations follow. Other correct explanations could be substituted.)

We can frequently substitute one resource for another.

For example, if we spend less money on food, we will probably need to devote more time and energy to buying and preparing food in order to continue having adequate, satisfying meals.

With more skill and ability in food planning, buying and preparation, a homemaker should not have to spend as much time in the kitchen.

#### b. Answers on pages 1.3 and 1.4

Size of family; ages of family members; income; entertaining done; likes, dislikes, and habits; supplies other than food purchased at the grocery store.

About 18 percent.

No, because percent spent for food does not include non-food items. Non-food items are included in the grocery bill.

#### c. Answers on page 1.1

We may place a value on a certain style-of-living or on hospitality and food relates to this.

Health may be of importance to a person. Food has a definite relationship to health and thus will influence success in other endeavors. We may be concerned with having enough energy - being properly fed will help.

We may want to be economical in buying foods so that we will be better able to satisfy some of our other needs and wants.

#### d. Suggested as activity on page 1.3

Plan ahead - buy what you need and can use wisely; look for "specials" or on-sale items; shop with a list - this may help prevent frequent trips to the grocery store and expensive "impulse buying"; know which foods from each food group are less expensive - use these frequently; prepare foods carefully so the family will eat them - avoid waste; store food carefully; compare prices - (of different brands, convenience and home-prepared, different size packages, grades of food, food giving similar food value) select those items which are good buys for you.

### FOOD PLANNING AND SHOPPING, page 2.7

#### 7. a. Answers on page 2.1

Color, flavor, texture, temperature, size and shape of foods served, method of cooking.

Menu (in this case, showing contrast in color, flavor, texture and temperature)

Tomato Juice	
Scrambled Eggs	Bacon
Toast	Margarine and Jelly
Milk	Coffee

FOOD PLANNING AND SHOPPING, continued

7. b. Answers on pages 2.1 and 2.5 - "Food for Fitness, A Daily Food Guide"

- Meat and meat substitutes - 2
- Milk - 2
- Breads and cereals - 4
- Fruits and vegetables - 4

Including one important for vitamin C

Including one, every other day, which is important for vitamin A

c. Answers on page 2.5

Placement of goods at eye-level; displays in the center of the aisle; special displays; bargain counters; packaging - designs, shapes, and colors; advertising - cents-off and other; premiums, stamps, games; the store - layout, colors, music; demonstrations and samples.

d. Answers on pages 2.1, 2.2 and 2.3

Money - price; time and energy available; cooking ability; equipment and space available; amounts needed - size of package; quality of food - grades available; forms and brands available; likes, dislikes and habits.

CONSUMER FOOD PROTECTION, page 3.5

- 1. T            4. F            7. T
- 2. T            5. T
- 3. T            6. T

OUR NATIONAL FOOD SUPPLY

Details

1. Answer on page following 4.2

Between producer and consumer: food processing company; wholesale food company; produce company; retail store; restaurant, school, hospital; roadside stand.

2. Answer on page 4.1

An average of about 40 percent.

3. Answer on page 4.1

The Consumer Price Index, prepared by the U. S. Department of Labor, Bureau of Labor Statistics, refers to percent change in retail prices of certain items at one time as compared to another time. Price changes of about 400 items are obtained. Items are given "weight" in the index according to their importance in consumer expenditures. The base time period of comparison is currently 1957-59. This base period is considered to be equal to 100. Prices collected at later times are compared to those of the base period and the percent change is calculated.

4. Answers on page 4.1

Supply and demand - at home and abroad; weather may affect supply; costs of production; marketing costs such as assembly and transportation, processing, wholesaling and retailing, packaging, advertising, etc.

5. Answers on page 4.2

Protect, convey, display and sell.

BUYING GUIDES

- 1. T            4. F            7. F            10. T
- 2. T            5. T            8. T
- 3. T            6. T            9. F

COMING ATTRACTIONS

Agents can expect copies of the following after September 1, 1968.

"When You Buy Lamb to Freeze"

"When You Buy Ground Meat to Freeze"

"Chicken As You Like It"

"If You Buy Fish and Shellfish to Freeze or Frozen"

"When You Buy Frozen Foods" - fact sheet

"Know Your Freezer Inside and Outside"

# Buying Beef for Your Home Freezer

**I**F YOU OWN a home freezer, chances are you've thought about stocking it with beef. Whether you plan to buy several cuts, a quarter, or a whole carcass there are several factors to consider if you want to be sure of getting the best buy for your money.

One way to be sure is to let the U.S. Department of Agriculture help. USDA's Consumer and Marketing Service offers a grading program which tells you not only the quality of the beef you buy, but also the amount of meat you can expect to get from an individual carcass.

Most consumers are familiar with USDA's quality grades for beef. The shield-shaped grade mark is an excellent guide to the quality of the beef you buy.

If you want tender, juicy, flavorful meat, it is best to freeze only high-quality beef. This is why U.S. Choice, the most popular grade of beef, is also widely used in home freezing.

In addition to grading for quality, C&MS also grades beef for yield. The yield grades, which are used mainly by packers and suppliers, measure the amount of usable meat in a carcass or wholesale cut. There are five numerical grades ranging from yield grade 1, which marks carcasses of the highest yield, to number 5, found on carcasses of the lowest yield.

Under ordinary circumstances, as consumers, you do not have to be concerned with yield grades. Their benefit, unlike the quality grades, reaches you indirectly through their use as a pricing tool. But if you buy beef in carcass or wholesale form, yield grades can help you get more beef for your money.

The higher-yield carcasses may cost a little more, but there will be more usable meat—meatier cuts—in a No. 1 or No. 2 carcass than in a No. 5 of the same quality grade.

For example, if you buy a 650 pound carcass, each higher yield grade will give you at least 20 more pounds of boneless meat. There are similar differences between wholesale cuts and quarters of beef.

If you plan to buy part of a carcass, you should decide whether you want to get more steaks and roasts or more stewing and ground meat. A hindquarter gives you more steaks—porterhouse, club, and T-bone—and oven roasts. The forequarter will contain more cuts, such as those from the chuck, which must be pot roasted or made into ground and stew meat.

Another factor to consider is cost. Because they contain more desirable cuts, hindquarters generally cost several cents per pound more than forequarters of the same grade.

As a prospective buyer, you should also consider the cutting and processing of the meat. Make sure the meat is packaged in portions which fit the size of your family or which will be easy to cook. Most dealers will cut the meat to suit your needs.

Supermarket specials on particular cuts also offer a good way to stock your freezer with the family's favorites. Buying meat this way assures you of getting only the cuts you prefer.

Home freezers are designed to save money on grocery bills by allowing you to stock up on foods when supplies are plentiful and prices favorable. But buying beef in such cuts or of such quality that do not meet your family's preference can hardly be called money-saving.

This is a pitfall which a consumer encounters when he

buys beef in a form with which he is unfamiliar. In addition there may be hidden dangers—disreputable dealers—which make the buying difficult.

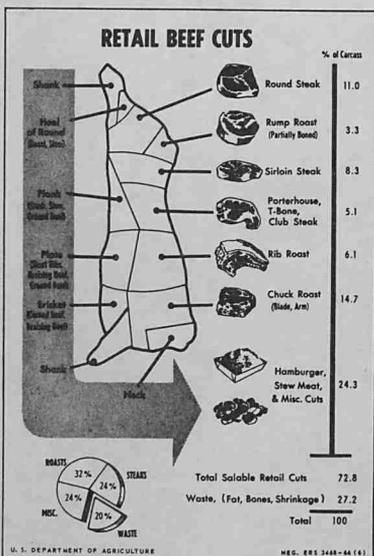
The majority of firms are reputable in their dealings with customers and in their advertising. However, there are some who will take advantage of a customer who lacks a knowledge of the product he is buying.

Misrepresentation and "bait and switch" advertising are two of the most common practices the buyer must watch. Misrepresentation may include leading the buyer to believe he is buying a specific USDA grade while, in fact, supplying him with meat from a lower grade animal or meat which has not been graded at all. Or, the buyer might receive meat from the forequarter instead of the hindquarter he thought he was buying.

"Bait and switch" advertising refers to the practice of advertising meat at a price designed to attract customers and then switching the customer to a higher priced meat.

Don't be taken in by advertising which offers "something for nothing." No dealer can afford to give beef away, and reputable ones will not pretend to do so.

To be sure, look for the Federal grade mark on the meat itself. The grade mark is your assurance that the beef will be the quality you want, and that you are getting real value for the price you pay.



Based on a typical yield grade 3 U.S. Choice carcass. Figures may vary with yield grade, cutting, and trimming.

**USDA AGRICULTURAL MARKETING**

(OVER THE DESK OF NITA ORR  
N.C. AGR. EXTENSION SERVICE  
SPECIALIST IN FROZEN FOODS)

## BEEF

by W. B. Austin Jr.  
Executive Secretary N. C.  
Cattlemen's Association

There is a close parallel in the settling of North Carolina and the introduction and growth of livestock in the state. Like most of our earliest residents, and the first cattle came into North Carolina from Virginia and South Carolina. These were mixed cattle that provided milk and meat for individual families. Commercial production was practically non-existent for many years as the state's developing agriculture was strongly oriented toward row crops.

Three hundred years later, North Carolina livestock is highly developed in terms of pure blood lines of cattle and definite specialization among producers. Dairy animals, which ultimately become beef animals, are among the highest milk producers in the Southeast. Blood lines are pure dairy-type with Holsteins, Jerseys, Guernseys and Brown Swiss breeds predominant.

The so-called "English breeds" dominate North Carolina's beef herds. These are Herford, Angus and Shorthorn. Other breeds are currently coming more strongly into the picture.

Production is specialized along these lines: purebred breeders who supply the "seed stock" for the industry; cow-calf operators who are the intermediate producers between the cow-calf man and the beef feeder; and the feedlot operator who finishes cattle to market weight.

The industry in North Carolina has developed more strongly in the direction of cow-calf than any other. Small farmers have found this specialization particularly well suited for many types of farming combinations. Feeding medium weight cattle, through the winter or on pasture during summer, is growing in importance. The state does little feeding out, although there are some 15 feedlots in the state of considerable size.

Despite the growth of the industry, North Carolina is a beef deficit state. According to figures released on January 1, 1968, there was 1 million head of cattle in the state. Of these, 270,000 were dairy animals. Many of the beef cattle are shipped out of state for fattening and later imported as consumer beef. This situation contributes to a meat deficiency in North Carolina of 300 million pounds -- the difference in 128 million pounds of beef produced and 428 million pounds consumed.

This helps to point out the opportunity North Carolina has to continue to develop its beef industry.

Today, when the American consumer buys a steak, he gets more quality and more meat for his money than ever before. How is this possible? For one thing, scientific methods of breeding and feeding produce carcasses yielding a higher percentage of quality lean. Modern refrigeration and feeding programs have a hand in it too. These stabilize prices by making beef available in quantity the year around. The retailer, who stakes his reputation on the meat he sells, also helps to increase the consumer's meat dollar. He knows the kinds, cuts, grades, and amount of meat that fit his customer's needs and budgets, and how to trim for greater economy.

The journey of the steak from hoof to skillet is a busy one that involves many people, ranchers, farmers, feeders, commission men, meat packers, shippers and countless others. It actually begins with the agricultural scientist who developed the grasses and feed to insure the calf's growth, and with the cattle producer who was willing to take a chance in the first place on what kind of money he could get for his animals. But to take the direct route, it starts at roundup time in the late summer or early fall when the grasses dry up and the cattle are shipped to market.

When the beef reaches the local market, it's then up to the retailer to select the kinds and cuts that will fill his customer's needs. With his knowledge of bone and muscle structure and his skill with knife and saw, he knows how to fashion the sides of beef into attractive, economical cuts. These he will either pre-wrap in cellophane or cut to each customer's exact specifications. Beef finds another spot on the shopper's market list in meat specialties, and as convenient meats-in-a-can.

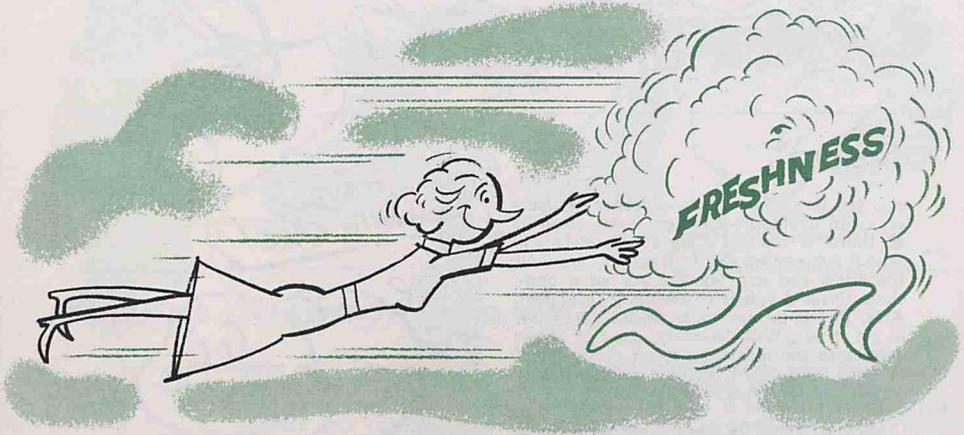
The steak we consumers buy may have been produced right here in the state, or it may have hailed from across the nation; but because of the know-how and teamwork of the people involved in today's cattle industry, we can be assured of getting our money's worth, both budget-wise and diet-wise.

In order for you to be assured of the quality and cut of meat being purchased by you, don't hesitate pushing the button located on your meat counter and ask the meat manager to cut your meat according to your own specification. Note and see the difference in how your family will react to this satisfaction of obtaining a good cut of quality beef.



*If you choose to eat*

# Good Frozen Pork...



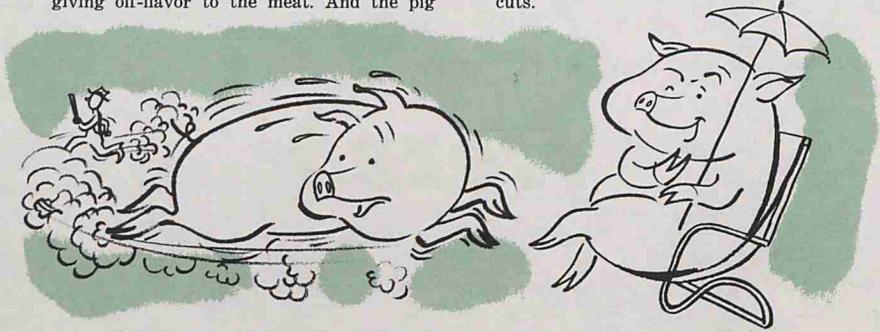
*...catch the freshness and hold it!*

You get good fresh flavor in a freshly killed pig.  
If you want to keep that fresh flavor in pork you eat  
from your freezer or locker months later, (1) keep your  
pig calm before you kill it; (2) kill it in a clean  
place; (3) keep meat well covered; and (4) keep it cold.

## Calm

When a pig is startled, frightened, or excited, blood rushes out into the capillaries (blood vessels) and much of it is still there when the pig breathes its last. That means the pig does not bleed well, resulting in a fiery carcass which gives the fat a pinkish tinge. Since blood is a choice place in which bacteria grow, some spoilage is apt to occur giving off-flavor to the meat. And the pig

uses up some body substance that is needed for good keeping qualities. So whether you slaughter at home or send your pig to a professional slaughterer (I vote for that), remember to keep it calm. And, too, if you hit the pig with sticks, poke it with poles, or kick it with your feet—you damage pork chops, tender loin, hams, and other choice cuts.



## Clean

Kill pig in a clean place—whether at home or at an abattoir—and keep meat clean at all times. If you kill a pig at one place and take it somewhere else to freeze it, clean out the truck bed and lay the pig on a clean cloth. Cover it lightly to protect it from dust. After dirt is in meat it is almost impossible to get it out. With handling, the dirt works down into the meat and much of the meat must be cut away. Even then some dirt may be left and meat has been wasted.

Clean meat keeps its fresh flavor longer than dirty meat. And clean, well-handled meat holds up better through emergencies such as power or freezer failure.



## Cold

Chill the pig carcass immediately. The temperature of the pig just after slaughter is 100°F. Under ideal conditions this temperature can be lowered 60 degrees in 12 hours. Actually, it is likely to take longer, but the chilling operation should start immediately and be completed as quickly as possible. Cut, package, and freeze the pork when the

inside of the thickest part is chilled to 38°-40°F.

If the fat starts to break down before the pork is frozen, the flavor changes. It continues to change and soon becomes poor. You can't hold the fresh flavor of the pork unless you catch it first. After the pork has a stale taste, there is no way to bring the fresh, sweet flavor back. It

FROM KILLING (never more than 48 hours) to FREEZING



merely gets staler—sometimes to the point of being rancid.

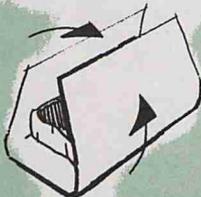
Freeze pork below 0°F. and store it at 0°F. or

colder. As soon as the pig is killed, chill it. As soon as it is chilled, freeze it. When meat is frozen keep it at 0°F. or colder.

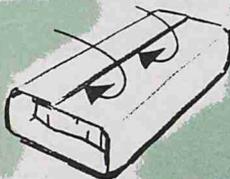
## Covered

A good “cover” or packaging material around your frozen pork helps the pork keep its good, fresh flavor. You must have the

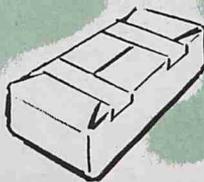
right kind of material, put it on right, and keep the frozen pork covered properly until ready to use.



Bring ends together



Fold 2 or 3 times to fit snugly around food



Press end folds firmly under package and seal

## Proper packaging prevents...

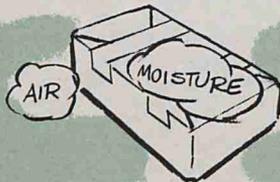
... drying (sometimes called “freezer burn”) which causes pork to be dry, tough, and stringy. This happens when moisture leaves the pork. In the form of vapor, moisture goes right through the packaging material unless the material is highly moisture-vapor resistant. This is one reason why ordinary fresh-meat paper and so-called “freezer papers” are not good to use for frozen pork.

... oxidation of fat. When the air gets to the pork the oxygen in the air causes the pork to have an old, stale flavor. So the material must be such that air will not go through. Put it on with tight closures. It must fit snugly around the pork.

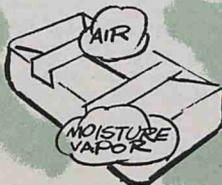
... transfer of odors from other foods or conditions that may develop during emergencies.

Aluminum foil that is made for freezing (not the household foil) is excellent for pork. There are good laminated sheets of packaging materials for pork on the market.

In most cases, the “drugstore” or “freezer” wrap is the best to use. Use just enough material to make neat substantial closures. Close the closures. That is, leave no open ends of packaging material. Turn them under or tape over them. Handle with respect. Just because a piece of frozen pork is as hard as a rock is no reason to pitch it around. Avoid scuffing, tearing, or puncturing the package.



Keep moisture or moisture-vapor in and air out by proper packaging and materials.



## Questions we get

### Q. How long will frozen pork keep good?

A. That depends on all the factors involved in the four C's—Calm, Clean, Covered, Cold. It takes almost a miracle to have everything perfect. If so, pork will keep good probably a year. Under average conditions pork loses its fresh flavor from 4 to 6 months, with ground pork breaking down sooner. No salted pork will keep good as long as fresh pork will when frozen.

### Q. Is frozen sausage ever good?

A. Yes. Use extreme cleanliness in handling sausage and extra care in keeping it cool. Also use the best packaging materials, put them on right, and keep temperatures constant. Often the fat in sausage meat has started to break down before the sausage is frozen. Then there is no way to keep it from getting a stale flavor.

### Q. Is it all right to buy pork roasts and chops at a grocery store and freeze them?

A. The source of your supply of pork does

not matter if the pork is fresh and has been handled right.

### Q. Can sausage be cooked before it is frozen?

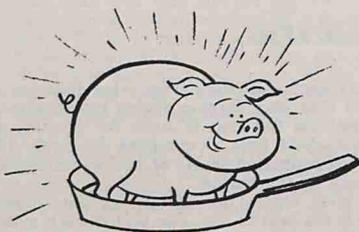
A. Yes. Here is one good way: Press into a cornered pan the amount of sausage you need for one meal. Cook in the oven slowly (pour fat off as it accumulates). Cook until sausage is done through but not as brown as you want to serve. Chill it quickly. One good way: Put a piece of foil on a layer of ice cubes in a tray. Put the uncut sausage on the foil. Cool on one side then turn. After sausage is chilled through, package, label and freeze it. When ready to serve, heat in oven until thawed and as brown as you like it. Cut into servings.

### Q. Why aren't there directions for freezing backbone and spareribs?

A. Both of these are packaging and space problems. Some people do freeze them anyway. It is hard to wrap backbone snugly enough to get the air out of the package. It takes on a stale flavor soon. Bones puncture packaging material easily. It is a spacewise extravagance, too.

## Solve the puzzle

... and you will have the secret to frozen pork as *fresh as life*

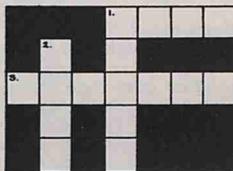


### Across

1. Kill a \_\_\_\_\_ pig.
3. This means packaged.

### Down

1. Freeze only \_\_\_\_\_ pork.
2. Get the carcass \_\_\_\_\_ quickly and keep the pork ---- er until ready to eat.



Prepared by Nita Orr, Extension Economist, Food Conservation & Marketing

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## FOODS AND NUTRITION

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