
Oregon State Agricultural College Extension Service

CORVALLIS, OREGON

Use Butter Use Cheese Use More Milk



PROGRAM MATERIAL FOR ORGANIZATIONS

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TWO programs for organizations are given in this second bulletin on dairy products. Butter and cheese are important in the diet of American people. Material for a program on each food is suggested; the one for butter on pages 3 to 15 and the one for cheese on pages 16 to 24.

Oregon producers of butter and cheese may well be proud that they can contribute to the food supply two products of such value to health. Oregon homemakers who are the buyers of the family's food in such a large proportion of homes can encourage the producers of butter and cheese of high quality by insisting upon the best. They can aid the dairy industry of Oregon as well as protect the health of their families by using these products.

The programs outlined in this bulletin stress particularly the contribution butter and cheese make to a wholesome diet. They are prepared to meet numerous inquiries that come to the College for such information in program form.

CLARIBEL NYE,
State Leader of Home
Economics Extension.

Use Butter Use Cheese

Use More Milk

A complete and unified program on the value and the use of butter is presented in brief outline form on this page and developed with greater detail in pages which follow.

1. **Roll Call** responded to by each member giving one of the "Twenty-five Facts About Butter" always proves a good "opener" for a program of this sort. See suggestion No. 1, pages 5-6.

2. **Reading** "The King's Breakfast" will amuse the audience. It is well-suited to a program emphasizing the use of butter. See suggestion No. 2, page 7.

3. **A twenty-minute talk** on "The Butter Industry of Oregon" helps in developing the theme of this program. See suggestion No. 3, pages 8-9.

The dialogue on "The Food Value of Dairy Products" presented in suggestion No. 3 pages 20-23, may be introduced at this place in the program, if desired.

4. **An exhibit** of common foods containing vitamin A serves to emphasize the presence of this health-promoting factor in dairy products. See suggestion No. 4, pages 10-12.

A film strip "Milk in the Home" may take the place of the exhibit on vitamin A, or may supplement it. This film contains pictures encouraging greater use of milk and milk products in the home. Supplementary notes are provided for the speaker who presents the picture. Films may be obtained from the Extension Service, Corvallis. User pays transportation to and from Corvallis.

5. **A rhyme contest announcement** invariably brings laugh-provoking jingles which carry a worth-while message. See suggestion No. 5, page 13.

6. **A demonstration** of the use of "Butter in Sandwiches" and "Cheese Fillings" offers an excellent opportunity to stress the principles of a well-selected diet and the importance of dairy products in each day's meals. See suggestion No. 6, pages 14-15.

7. **Refreshments** may well form a part of the program. A generous use of dairy products in the dishes served will emphasize the theme of the meeting. See suggestion No. 7, page 15.

SUGGESTION NO. 1

Roll Call Material

Instructions—Hand out one fact to each member before meeting opens. Conduct roll call by name or number.

TWENTY-FIVE FACTS ABOUT BUTTER

1. Although butter has long been considered a desirable article of the diet, it was not until 1913 that a unique dietary property was found to belong to it. This property is called "vitamin," a word coined from the Latin noun *vita*, meaning "life."

2. A statement from Dr. E. V. McCollum and his coworker Miss Nina Simmonds, is this: "Among all the fats which are acceptable to the appetite none is so rich in vitamin A as butter-fat." Butter-fat may be obtained by using whole milk, cream, or butter.

3. Vitamin A, found in large quantities in butter, promotes growth; helps to build up resistance to respiratory diseases, such as colds and sinus trouble; increases length of life; vitally affects reproduction; and prevents and cures xerophthalmia (pronounced ze-rof-thal'-me-ah), an eye disease.

4. Dr. Amy Daniels of the Child Welfare Research Station of the State University of Iowa has conducted studies of the food habits of children suffering from respiratory diseases or infections such as those of the sinus and mastoid. She concludes that there is a direct relation between these disorders and the amount of butter-fat consumed by the individual. She found that where no butter-fat or only a small amount of it was used respiratory infections were prevalent; where generous amounts were consumed the diseases were not found. She experimented further and found that by increasing the consumption of butter-fat with its vitamin A content an immunity to these infections was built up in the body.

5. Dr. E. V. McCollum says this concerning the value of butter: "Butter furnishes a substance which the diet should always contain in abundance, in order to protect the growing child against rickets, which is a disease now very common in both Europe and America."

6. The three Coast states produced 8.1 percent of the total butter output of the United States in 1928. In the same year these Coast states and twelve Central states combined furnished 82.2 percent of the total.

7. Each dairy cow in Oregon brings in \$116 on an average in a normal year. Of this sum \$57 is for butter alone.

8. At the National Dairy Exposition held in St. Louis, Missouri, in October, 1929, where a large number of samples of butter from twenty different states and from Canada were exhibited, Oregon made an excellent showing. In the storage-butter exhibit an Oregon sample tied for third prize, receiving a score of 94.25. This butter had been held in storage from

June to October at St. Louis. In the fresh-butter contest Oregon obtained an average score of 92.74 in the unripened class and 93.17 in the ripened class.

9. In the International Butter Contest held in connection with the Dairy Industries Exposition in Toronto, Canada, in October, 1929, where two hundred and fifty tubs of butter represented the best made in the United States and Canada, the butter exhibited from Oregon received an average score of 93.17.

10. Overworked butter has a sticky, salvy body, a dull, greasy appearance and a gummy grain. It deteriorates more rapidly than properly worked butter.

11. A rich golden yellow is "nature's trade-mark" for butter. The yellow pigment found in butter comes from green foodstuffs, corn silage, and yellow carrots eaten by the cow and assimilated into her blood stream and her milk secretion.

12. Demand good-quality butter. Refuse to buy bitter or fish-flavored butter or butter that is mottled, dirty, or gritty with salt. Good butter has a sweet nutty flavor, a smooth, even-grained body and a uniform color; it is wrapped in clean paper and kept in a cool, sanitary place.

13. It is estimated that at present the average family spends for dairy products 22¢ of every dollar expended for food. Based on the moderately-priced dietary suggested by Dr. Mary Swartz Rose it is found that, in the interest of child growth and general health and efficiency, 36¢ out of every food dollar should be expended for milk and its products.

14. Scientists interested in the promotion of the country's health recommend that the annual consumption of dairy products be increased as follows: milk from 56.5 gallons to 90.4 gallons per capita, butter from 17.6 pounds to 28.16 pounds per capita, ice-cream from 2.63 gallons to 4.21 gallons per capita, and cheese from 3.48 pounds to 5.56 pounds per capita.

15. Butter is easily and quickly digested. This is the way Dr. H. C. Sherman explains this fact: "The fat of milk is of low melting point and exists in an emulsified form, both of which properties are favorable to its ease and completeness of digestion." Butter is all food and no waste—97.88 percent digestible.

16. The energy value of one pound of butter is about 3,600 calories, or sufficient to supply the daily energy requirements of a man engaged in hard labor.

17. Butter may be used to advantage in almost any cooking process—in frying, roasting, baking; in making desserts; or in seasoning food.

18. Delmonico's Restaurant in New York City was made famous by the wonderful flavor of the foods served. The reason given for the distinctive flavor of its products was: "We always cook with butter." For recipes using butter, write to Extension Service at Corvallis. These recipes are free.

19. Butter has its chief value in combination with other foods. Use butter when seasoning vegetables, fish, and meats. Home economists caution against serving foods "swimming in grease."

20. The delicate flavor of any dish is improved by the use of butter. When preparing puddings and sauces or making candy use butter.

21. "Butter should be used as a spread, in cooking, and in the preparation of various food dishes whenever possible, for a liberal supply of the vitamin (vitamin A) is better than the minimum on which growth is possible." This statement was made by Dr. E. V. McCollum of Johns Hopkins University, who is recognized as an authority on nutrition.

22. Mothers who wish to protect their children, and persons who wish to develop and maintain the best of health, will make certain that dairy products—milk, butter, cheese, cream—are used liberally in the daily diet.

23. According to the United States Bureau of Home Economics, the following proportions of various food groups are recommended for the daily diet of a person doing an average amount of work; vegetables and fruits, one-fifth; milk, eggs, cheese, meats, poultry or fish, one-fourth; all cereals and baked foods, one-fourth; sweets in any form, one-tenth; and fats and fat foods, including butter, cream, lard, table oils and fat meats, one-fifth.

24. Each day's ration for the growing boy or girl up to thirteen years of age should include leafy green vegetables, fresh fruit, one quart of milk, whole grains in the form of cereals and bread and butter, an egg and one serving of meat.

25. Butter is an economical food; when you use it you get more for your money than you could from any other food fat; you get a rich and inimitable flavor, a satisfying and easily digested food fat that furnishes energy, and liberal amounts of two important vitamins that promote growth and protect your body against respiratory diseases.

Johnny ate both cake and pie
Then slowly shook his head—
"There's nothing I like quite so well
As good butter on some bread."

Twinkle twinkle, little star,
Are there children where you are?
Up there in the milky way
Does each get his quart a day?
(By school child, Everett, Washington.)

Cheese eaten with crisp crackers
Has a wide and sure appeal;
Combined with fruits or vegetables
Cheese makes a hearty meal.

Butter is best where milk is clean,
Milk is cleanest where grass keeps green;
Here cows can range in the open field
That's why best butter is Oregon's yield.
(By housewife, Corvallis, Oregon.)

Johnny was a skinny kid,
As skinny as a crow,
But now he's drinking milk each day,
And you should see him grow.
(By school child, Boise, Idaho.)

Does your family have the snuffles?
Are you rundown, listless, thin?
The chances are you need more butter
With its priceless vitamin.

Ice-cream is made of good things
Of cream and eggs and flavor;
Ice-cream is liked by young and old
And never loses favor.

You may not own a dairy
Nor milk a single cow,
But you do love your children
So give them butter now.
(By teacher, Corvallis, Oregon.)

SUGGESTION NO. 2

Reading

THE KING'S BREAKFAST

The King asked
The Queen, and
The Queen asked
The Dairymaid:
"Could we have some butter for the
Royal slice of bread?"
The Queen asked the Dairymaid,
The Dairymaid said, "Certainly,
I'll go and tell the cow now
Before she goes to bed."
The Dairymaid she curtsied,
And went and told the Alderney:
"Don't forget the butter for the
Royal slice of bread."
The Alderney said sleepily:
"You'd better tell his Majesty
That many people nowadays like marmalade instead."
The Dairymaid said, "Fancy!"
And went to Her Majesty.
She curtsied to the Queen, and
She turned a little red:
"Excuse me, Your Majesty, for taking the liberty,
But marmalade is tasty if it's very thickly spread."
The Queen said, "Oh."
And went to his Majesty:
"Talking of the butter for the Royal Slice of bread,
Many people think that marmalade is nicer.
Would you like to try a little marmalade instead?"
The King said, "Bother!"
And then he said, "Oh, deary me!"
And went back to bed.
"Nobody," he whimpered, "Could call me a fussy man:
I only want a little bit of butter for my bread!"
The Queen said, "There, there!" and went to the Dairymaid.
The Dairymaid said, "There, there!" and went to the shed.
The cow said, "There, there! I didn't mean it;
Here's milk for his porringer and butter for his bread."
The Queen took the butter and brought it to his Majesty;
The King said, "Butter, eh?"
And bounced out of bed.
"Nobody," he said as he kissed her tenderly,
"Nobody," he said as he slid down the bannisters,
"Nobody, my darling, could call me a fussy man—
BUT
I do like a little bit of butter to my bread!"

*From *When We Were Very Young* by A. A. Milne.

NOTE: This reading may be dramatized.

SUGGESTION NO. 3

Twenty-minute Talk

THE BUTTER INDUSTRY OF OREGON

1. Size of Oregon's butter industry

- (a) Manufacture of creamery butter shows gradual increase for ten-year period 1919-1928. "The average yearly output per creamery in 1919 was 165,992 pounds. In 1928 it was 238,713 pounds, which is an increase of 44 percent."
- (b) The 108 Oregon creameries manufacturing butter in 1928 made a total of almost 26,000,000 pounds of butter.
- (c) A comparison of the amount of butter manufactured in Oregon in 1928 and the amount produced in adjoining states shows the following:

State	Butter <i>lbs.</i>
Oregon	25,781,038
Idaho	22,155,825
Washington	28,907,219
California	76,785,682

2. Prices received for Oregon butter

- (a) The value of Oregon's dairy products for 1928 amounted to \$24,662,000, or 14.4 percent of the value of the state's agricultural products:
- | | |
|--|--------------|
| Value of manufactured butter output..... | \$11,390,378 |
| Value of manufactured butter-fat output..... | \$1,377,000 |
- (b) The average butter-fat price paid producers in Oregon in 1928 was 2.3¢ higher than the average paid in the eleven western states; in 1929 the average price was 1.1¢ higher:

	1928	1929
Oregon	48.2¢	47.9¢
Idaho	45.9	45.6
Washington	49.0	48.3
California	47.0	46.8

3. Consumption of Oregon butter

- (a) Oregon needs annually 914,000,000 pounds of milk (including milk and milk equivalents). This is based on an estimated population of 914,000 consuming 1,000 pounds of milk per capita, the government estimate for the average consumption of the country. This estimate allows for 18 pounds of butter for each individual.
- (b) Approximately four-fifths of Oregon's manufactured butter, or about 20,000,000 pounds, is consumed in Oregon.
- (c) Approximately one-fifth of Oregon's manufactured butter, or about 5,000,000 pounds, is sold outside the state. No record of the amount of butter made on farms is available.
- (d) According to Dr. Mary Swartz Rose, authority on nutrition, a desirable average butter consumption is 28 pounds per capita per year. This would mean a total butter consumption for the State of Oregon of about 26,000,000 pounds, or the total amount manufactured in the state.

4. Quality of Oregon butter

(a) The quality of Oregon butter shows a gradual improvement. This is shown by a series of scorings on market samples conducted by Oregon Agricultural Experiment Station:

	1926 March and April 56 samples	1929-30 March to February 404 samples
	%	%
Below 90.0	69.6	20.79
90.00-91.0	18.0	33.88
91.0-92.0	7.1	33.91
92.0 and above	5.3	7.92

(b) The 404 samples noted above came from fifty creameries of the state which represent 75 percent of the butter manufactured in Oregon. As noted, 79.71 percent of these samples are scored as first or extra grade quality. Official government reports classify butter scoring from 90 to 91 as "good butter" and butter scoring from 92 to 93 as "best butter."

(c) According to government officials, there are no reliable data available to indicate the average quality of the butter made in the western states since such a small percentage of the butter manufactured is officially inspected.

5. Outlook for Oregon's butter industry

(a) Continued improvement in the quality of Oregon butter is expected. This will be accomplished by eliminating all butter scoring below 90.0—that is, advancing such products into the "good butter" class—and by increasing the amount scoring 92.0 and above. To do this there must be:

- (1) Improvement in production methods; better sanitation; increased facilities for cooling milk and cream.
- (2) More regular deliveries of cream to creameries.
- (3) Continued improvement in manufacturing methods in creameries.
- (4) Wider use of fine-flavored butter culture in butter-making.
- (5) The use of all facilities for butter inspection offered by the Federal-State market inspection and reporting service, which places the "certificate of quality" in the package.

(b) An enlarged consumer's demand for better butter is seen. The population of Oregon is on the increase. Consumption of "good" or "best" butter increases the demand for such butter. "Dealers state that there is a greater demand than ever before for butter of 92 score or better. Portland is rapidly moving toward status as a first-grade butter market, a position it has never occupied."

References

The Butter Industry of Oregon, Oregon Agricultural Experiment Station Bulletin 258, December, 1929.
 A Survey of Marketing Problems Confronting Oregon Creameries, Oregon Agricultural Experiment Station Circular 74, 1926.
 Monthly Scoring and Analysis Service. Mimeographed report from Dairy Husbandry department, Oregon State Agricultural College.
 Foundations of Nutrition. Mary Swartz Rose. 1927.
 Crops and Markets. 1928 and 1929.
 Idaho State Department of Agriculture.
 United States Bureau of Agricultural Economics.
 California Bureau of Dairy Control.
 Marshall Dana in Oregon Journal. March 30, 1930.

SUGGESTION NO. 4

Vitamin A Exhibit

GET VITAMIN A
THE PLEASANT WAY—
USE BUTTER

1. Facts for exhibit

Butter and green vegetables are particularly rich in vitamin A. These quantities of common foods are equal in vitamin A content.

Food	Approximate measure	Pounds	Ounces
Butter.....	4 tablespoons	.....	2
Egg yolks.....	2 (medium)	.....	1
Spinach (fresh).....	2½ tablespoons (cooked)	.....	1
Carrots.....	3½ tablespoons (grated)	.....	1
Cheese (American).....	10 tablespoons (grated)	.....	3
Peppers (green).....	2½ (3½" long)	.....	7
Peas (green).....	2 cups (shelled)	.....	10
Potatoes (sweet).....	1½ (medium)	.....	10
Tomatoes.....	2 (medium)	.....	11
Lettuce.....	2 heads (medium)	1	.....
Beans (string, fresh).....	5 cups (1" pieces)	1	3
Bananas.....	3½ (medium)	1	3
Milk.....	3½ cups	1	14
Orange juice.....	10½ cups	5	6
Cabbage.....	44½ cups (shredded)	6	15
Cauliflower.....	10 heads (4½" diameter)	6	15
Apples (fresh).....	20 (medium)	7	8
Potatoes (white).....	43½ (medium)	14	7
Turnips (fresh).....	76 cups (½" cubes)	21	5
Beets (fresh).....	194½ (2" diameter)	23	7
Lemon juice.....	75 cups	37	8

2. Ways to present exhibit

- (a) By assembling several or all of the materials suggested and accompanying them with a chart of explanation. See chart on page 12.
- (b) By using posters which may be on display during the entire meeting or left for exhibit following the explanatory talk.
- (c) Exhibit may be used as part of the demonstration "set up" or used as reference material for the dialogue on "The Food Value of Dairy Products."

3. Explanation of exhibit

May be made by some member of the organization or presented by some nutrition authority in the community.

May be built around this suggestive material:

- (a) *Vitamin A is vital to life.* The following facts about vitamin A are quoted from the scientist, Dr. Mary Swartz Rose: (a) Vitamin A is indispensable for normal growth and reproduction, (b) is necessary for maintenance of health and vigor throughout life, (c) can be stored in the body tissues to a remarkable extent and makes them more resistant to certain types of bacterial infection. This is especially true of air-passage, lungs, sinuses, ears, bladder, skin, and digestive tract tissues. (d) At all times the tissues should have a liberal store of vitamin A.

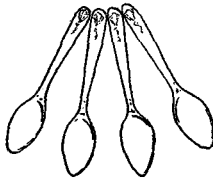
- (b) *Vitamin A is needed in large quantity.* Mrs. Rose further states that present research indicates that a good reserve of vitamin A may be maintained in the human child or adult by the daily intake of vitamin A equal to that furnished by a quart to a quart and a half of whole milk.
- (c) *Butter is a readily available source of vitamin A.* Scientists recommend the use of at least four tablespoons or two ounces of butter a day for each individual. This amount of butter will furnish two-thirds of the desired daily requirement of vitamin A. Other foods, particularly milk and green vegetables, should furnish the other one-third.
- (d) *Refer to the exhibit of common foods* containing vitamin A in the same amounts as found in two ounces of butter. Note the vegetables that are especially rich in vitamin A along with dairy products.
- (e) *Butter holds a unique place in the diet.* Butter is the only one of the exhibit group (with the exception of milk) that can be used day after day in every meal of the day without proving distasteful. Butter added to any vegetable increases its tastiness as well as its food value. Butter is the only one of the exhibit group that furnishes energy in any great amount in addition to its valuable vitamins. Safety lies in a varied diet—milk products, vegetables, fruit, eggs, all containing vitamin A.

THE VITAMIN WEALTH OF BUTTER MEANS HEALTH
EVERY DAY FOR EVERY MEAL
USE BUTTER.

USE THESE DAIRY PRODUCTS DAILY
To supply vitamin A required for growth
To store vitamin A needed for protection



**One pint
MILK**



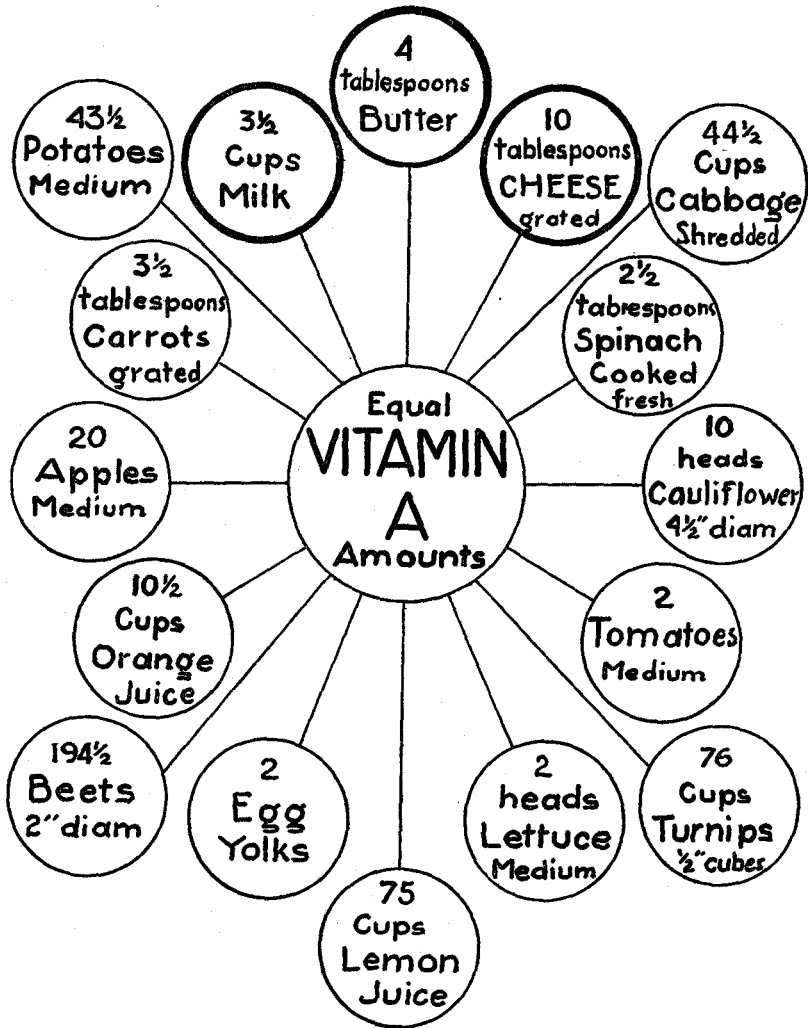
**Four tablespoons
BUTTER**



**one ounce
CHEESE**

VITAMIN A

Prevents colds - Promotes growth



Approximate Measures

SUGGESTION NO. 5

Rhyme Contest

1. **Purpose of contest.** To encourage a greater use of dairy products, particularly butter and cheese and ice-cream.
2. **Rules of contest.**
 1. The theme of all rhymes shall be the use of good-quality dairy products for health, or the value of them as food.
 2. Rhymes must not be longer than five lines.
 3. Rhymes will be judged on the following points:
 - a. Development of the idea
 - b. Originality
 - c. Literary value
 - d. Neatness
 4. Any number of rhymes may be handed in by any person.
 5. Full name and address of contributor should be written on back of each rhyme contributed.
 6. A rhyme editor will receive all contributions and hand them to the judges.
 7. Prize-winning rhymes will be announced at the next regular meeting.
3. **Judges of contest**

Three judges will pass on the merits of all rhymes submitted. One judge may be chosen for his knowledge of literary values, one for his judgment of advertising possibilities, and one for his interest in the use of dairy products for health. These three judges may be a teacher, a farmer, and a mother.
4. **Prizes for contest**

Prizes may or may not be given, as desired. Money or dairy products may be used for awards. Effective use has been made of the following suggestions:

 - a. One dollar each for the five best rhymes
 - b. A calf for first prize
 - c. A five-pound hoop of cheese for first prize
 - d. An order for one gallon of ice-cream
 - e. A pound or roll of butter
 - f. Certificates, ribbons, or honorable mentions.
5. **Publicity for contest**

Local newspapers usually are glad to cooperate by printing some of the rhymes each day or each week of the contest. Sometimes the newspaper will take charge of the contest or act as the contest editor to receive all contributions and turn them over to the judges.

SUGGESTION NO. 6

Demonstration

BUTTER IN SANDWICHES — CHEESE FILLINGS

Demonstrators may be girls, boys, or adults.

Costumes may be any clean, washable garments. Smocks, white or yellow with contrasting trim of yellow or white, are neat and attractive.

Equipment and supplies.

Clean work table
Large mixing bowl
6 small bowls
Fork for creaming
Knife for spreading
Spoon for each cheese mixture

$\frac{1}{4}$ pound of butter (softened)
 $\frac{1}{2}$ cup cream
1 loaf bread (cut in 12 slices)
6 cheese fillings (selected from the recipe slips)

Demonstration outlined below gives background ideas for speakers.

First Girl (talking)

Introduces team.

Tells how sandwich originated in 18th century when Earl of Sandwich refused to leave the gambling table and demanded for his dinner two slices of bread with meat between them.

States theme: How to make the most of the popular sandwich.

Mentions that two things are essential: bread, preferably 24 hours old and cut in one-fourth inch slices; butter, creamed and spread evenly on both slices of bread to the very edge.

Suggests various types of sandwich fillings — minced egg, lettuce and dressing, meat and vegetables, peanut butter and raisins, chopped celery and nuts, fish and pickle, carrot and onion, others.

Emphasizes use of cheese; especially tasty and attractive, lends itself to many combinations.

First Girl (helping)

Creames butter.

Hands poster to speaker and continues to prepare butter mixture.

Second Girl (helping)

Acknowledges introduction with bow and smile.

Shows huge sandwich made of two thick slices of bread and a slice of meat.

Checks equipment and supplies.

Arranges sliced bread in neat pile.

Shows butter.

Shows poster of many kinds of sandwiches (use magazine cut-outs for posters).

Shows special poster of cheese sandwiches.

Second Girl (talking)

Explains that creamed butter is easy to spread.

Tells how to cream butter: heat slightly until soft but not melted. Keep warm and add cream. Beat until smooth and fluffy.

Discusses butter: food desired for flavor and nutritive value—used

The poster is one of the prize-winning slogans in a recent Oregon contest. It reads:

"For perfect health
without, within,
Eat plenty of butter
and you'll win."

First Girl (talking)

Tells about different cheese fillings, how they are mixed and how put into sandwiches (see recipe slips).

Suggests sandwiches for school lunches, parties, picnics. For a picnic try taking along sliced bread, creamed butter and sandwich filling. Let each one spread his own sandwiches.

Mentions other ways of using butter and cheese (as shown on recipe slips).

Both girls hand sandwiches to persons in charge of meeting and distribute recipe slips as committee serves refreshments to all.

SUGGESTION NO. 7

Refreshments

Refreshments should be ready to serve at the end of the sandwich demonstration.

If only light refreshments are desired, hot cocoa and various kinds of cheese sandwiches are suggested. See recipe slip for different kinds.

Cocoa—(Recipe for 50 servings)

3 gallons milk 1½ cups cocoa 1 teaspoon vanilla
3 cups sugar 1½ cups water ½ teaspoon salt

Combine sugar, cocoa and water and cook to a smooth sauce. Combine with heated milk. Add vanilla and salt. Mix thoroughly. Beat with egg beater just before serving. Serve hot.

If a dairy-products meal is desired, select one of the menus suggested below. Large-quantity recipes for any dishes mentioned in these menus may be obtained by writing to Extension Service, Oregon State Agricultural College, Corvallis, Oregon.

Scalloped potatoes with cheese

Cold boiled ham

Cabbage-raisin-nut salad

Rolls Butter

Tapioca Pudding Cake

Coffee Cream

Cocoa or milk for children

Macaroni and cheese

Stewed tomatoes

Green onions Radishes

Whole wheat bread Butter

Butterscotch cream pie

Coffee Cream

Cocoa or milk for children

in combination with other foods—its unique value, as follows:

Makes us grow—has vitamins—word "vita" means "life."

Builds resistance to disease of nose, throat, sinuses, eyes.

Gives energy in concentrated form.

Has unique, delightful flavor.

Is surest and most practical way of getting vitamins in each meal.

Second Girl (helping)

Spreads butter on bread to the very edge.

Makes up various kinds of cheese sandwiches from fillings.

Use Cheese Use Butter

Use More Milk

A program emphasizing the value and the use of cheese in the diet is briefly outlined below and presented in greater detail in subsequent pages.

1. **Roll call** material is furnished in the "Twenty-five Facts About Cheese." Opening a meeting in this fashion secures interest in the program at the beginning. See suggestion No. 1, pages 17-18.

2. **An exhibit** showing the protein content of common foods emphasizes the value of cheese in this respect. See suggestion No. 2, page 19.

An especially attractive supplementary exhibit is one showing salads made with various combinations of fruits and cheese or vegetables and cheese. A list of salad suggestions may be obtained by writing to the Extension Service, Corvallis, Oregon.

3. **A dialogue** on "The Food Value of Dairy Products" is suited to any program and is a particularly good follow-up to the exhibit on protein. It presents sound information in an entertaining way. See suggestion No. 3, pages 20-24.

The playlet, "The Queen of the Foods" is a delightful entertainment that may be introduced into the program here. It takes from ten to fifteen minutes. Copies of the playlet may be secured by writing the Extension Service, Corvallis, Oregon.

4. **Refreshments** if carefully selected and prepared may serve to emphasize the point of the program. See suggestion No. 4, page 24.

The demonstration outlined in suggestion No. 6, pages 14-15, may be presented in this program just before refreshments are served.

SUGGESTION NO. 1

Roll Call Material

TWENTY-FIVE FACTS ABOUT CHEESE

1. Cheese is supposed to have been discovered by an Arab who, centuries ago, carried milk in a skin bottle made from the stomach of a calf. The rennet, or digestive ferments, remaining in the dried stomach changed the milk into cheese.

2. Cheese is made of the solid ingredients found in milk, with most of the water taken out. It contains milk fat, casein, and a large percentage of the mineral salts and vitamins.

3. Cheese is an energy-giving food containing twice as much fuel as beef and three times as much fuel as eggs.

4. Dr. E. V. McCollum, professor of hygiene and public health at Johns Hopkins University, says: "There are but two kinds of foods which are rich in calcium. These are milk and cheese, and those vegetables of which the leaves are edible.

5. Quoting from bulletin 1207 of the United States Department of Agriculture we have this: "Cheese, containing as it does almost all the protein and often most of the fat of the milk from which it is made and having a comparatively low water content, is a very nutritious food and the cheaper kinds may well be used more abundantly than is commonly the case in this country as a part of the regular diet and not simply as a condiment at the end of a hearty meal." Because cheese is a highly concentrated food it should be chewed thoroughly before it is swallowed.

6. Dr. E. V. McCollum, scientist, says: "Every one should have every day a quart of milk or its equivalent in cheese, cottage cheese, or such dishes as custards, ice cream, junket, cocoa, milk toast or creamed soups and vegetables."

7. Dr. Langworthy, former chief of the Bureau of Home Economics at Washington, says this: "From the standpoint of the housekeeper, cheese is of importance because of its high nutritive value, particularly its high percentage of protein or muscle-forming materials; because of the ease with which it can be kept and prepared for the table; and because of its appetizing flavor and of the great variety of ways in which it can be served."

8. Cheese, milk, eggs, meat, fish, poultry and nuts are the chief sources of "complete proteins" required by the body.

9. Experts from the United States Department of Agriculture conducted experiments on the digestibility of cheese. Their tests show that cheese is from 90 to 93 percent digestible.

10. It is said that the diet of the athletes for the Olympics of olden times was especially severe before the games. Also, that the principal nourishment of the contestants was "fresh cheese, dried figs and wheaten porridge."

11. Dr. Mary Swartz Rose in her book, "The Foundations of Nutrition," says: "Half a pound of cheese will provide sufficient protein of the best quality for an average man for a day, and fully one-third of his total calories. The simple addition of a pound of whole-wheat bread and a couple of pounds of fruit will result in a diet adequate for an adult in every respect and at a most moderate outlay of money and effort."

12. C. F. Doane of the United States Bureau of Animal Industry who reported the tests made on cheese digestibility says: "Cheese can no longer be discriminated against because of a suspicion that it is not a healthful food . . . cheese can be eaten in large quantities without danger to health."

13. Dr. Henry C. Sherman, professor of food chemistry at Columbia university, says: "In most localities cheese gives a greater return in food value for the money expended than other staple foods of animal origin."

14. Oregon holds third place in cheese production in the United States. She manufactures about 12,000 pounds of cheese each year, which is approximately 2½ percent of the total national production. Wisconsin leads the nation, furnishing about 70 percent; New York state comes next with nearly 14 percent.

15. The per-capita consumption of cheese in the United States is 4 pounds; in England, 9½ pounds; in Switzerland, 23 pounds.

16. Skim milk is used extensively for feeding animals; every one knows that it is good for calves, pigs, and chickens, and that they make their best growth when it is abundant in the ration. The fact that skim milk can supply a rich and nourishing food for the family table has not been so fully recognized; cottage cheese is made from skim milk.

17. Flavor is the best indication of quality in cheese. A crumbly cheese has an acid flavor; a new cheese has a mild flavor and is tough and leathery in texture; an old cheese has a stronger flavor.

18. Cottage cheese is judged by its flavor and texture. A high-quality cheese should have a clean, mild, acid flavor and a smooth texture, free from lumps and uniform throughout.

19. Most people like plain uncooked cottage cheese. It is especially pleasing in summer; when blended with rich cream and a little salt it is enjoyed by many. It is often eaten with sugar and cream. When cream is lacking, whole milk is used to moisten the cheese and sugar.

20. Physicians often find a milk diet useful in treating the sick. In many of these cases it may be possible to substitute cottage cheese for part or all of the milk. Thus a pleasing variety is introduced.

21. Staple kinds of cured cheese have practically no spoilage waste and they can be served in a score of appetizing ways, thus placing these kinds of cheese among the handiest and most economical foods with which a larder can be stored.

22. Cheese supplies more cheaply than meat the muscle-building part of the diet, hence is used widely as a meat substitute. It is wise to include coarse foods in a meal that contains much cheese as these foods supply roughage needed.

23. Cream cheeses are suitable in any course of a meal. They may be a part of the appetizer at the beginning of a dinner, of the dessert at the end, or of any course in between.

24. Cheese may be served alone or in combination with other foods and thus supply important proteins in the diet. Cheese may be used to advantage in salads, desserts or cooked dishes.

25. A good scalloped dish baked in the oven utilizes milk. The addition of cheese gives greater food value as well as a pleasing flavor. Try it sometime. A variety of cheese dish recipes may be obtained by writing the Extension Service, Oregon State Agricultural College, Corvallis, Oregon.

SUGGESTION NO. 2

Exhibit Material

CHEESE CONTAINS VALUABLE PROTEINS

1. Facts for exhibit

One pound of American cheese contains as much protein as any one of the following foods in the amounts given:

Pounds	Ounces	Food	Pounds	Ounces	Food
1	0	Cheese (American)	2	4	Chickens (broilers)
1	4	Beans (navy, dried)	2	7	Eggs
1	7	Beef (round, medium fat)	3	0	Bacon (smoked)
1	9	Beans (lima, dried)	3	1	Bread
1	13	Lamb (leg, medium fat)	5	14	Walnuts (English)
1	14	Halibut (steak)	8	0	Peas (green)
1	14	Salmon (steak)	8	12	Milk (whole)
2	2	Pork (loin, medium fat)	13	11	Beans (string, fresh)
2	3	Ham (fresh, medium fat)	16	1	Potatoes

2. Ways to present exhibit

By assembling those foods which can be obtained without too great difficulty.

By using posters.

By explaining.

Exhibit may be on display during entire program or may be brought in as a special feature.

3. Explanation of exhibit

Exhibit may be explained by some organization member previously appointed, or by some nutrition authority in the community.

Explanation may include these facts:

- (a) Cheese is the solid portion of milk, chiefly proteins, fat and mineral salts.
 - (1) Proteins make muscle and repair body tissues.
 - (2) Proteins furnish large amounts of body energy.
 - (3) Life cannot exist without proteins.
- (b) Cheese contains more muscle-building material (proteins) pound for pound as purchased than any other common food. Refer to exhibit which compares the most common protein-rich foods.
- (c) A government bulletin from the home economics research laboratory says: "The housekeeper, in suitable ways, can use cheese, meat, fish, eggs and other foods of similar composition as substitutes for one another, being governed by their relative market value at different times and seasons, by the tastes of her family and similar considerations."
- (d) From the same government bulletin we have this: "Experiments have shown that when eaten raw or carefully cooked, cheese is as thoroughly digested as other staple foods."
- (e) Cheese furnishes a cheap source of protein at the present time. A recent market report (April, 1930) reads: "Dairy products dealers are offering an unusually large variety of cheese. Prices are the lowest for a number of years."

SUGGESTION NO. 3

A Dialogue

THE FOOD VALUE OF DAIRY PRODUCTS

Curtain rises as two persons enter talking together. Both approach table in center of stage.

FIRST PERSON [laughing]: This fellow Happy Goldsmith certainly is clever. Listen to this [reads from a booklet]: "Just in case you'd like to meet yourself! No food on earth contains so much of YOU as a glass of milk does. It contains your shin-bones, your teeth, your finger-bones—even your funny bones. It is YOU all over. There is no substitute for milk any more than there is a substitute for YOU. What you see of yourself when you look in a mirror is nothing compared with what there is of you concealed in a glass of milk."

SECOND PERSON [laughing]: That's very cleverly put all right, but do you honestly think that milk is such a necessary food?

FIRST PERSON [growing serious]: Do I? I should say I do. Milk is considered the most nearly perfect food there is. In addition to all that bone-making material Happy talks about, milk contains some other very important things that many of our common foods lack or contain in very small amounts.

SECOND PERSON: Just what are those things, anyway. I've been hearing so much lately about milk and other dairy products and how good they are for one! I'd like to know why milk is better than any other food.

FIRST PERSON: Well, sit down and we'll have a little chat about this subject. [Both sit down at table, facing audience.] Now in the first place there is lime in milk and lime is essential in your body to build bones and teeth. In addition it helps your heart to beat regularly and your blood to coagulate when you are cut.

Two other important food materials are obtained from milk: protein and vitamins. Protein is called a "muscle-builder" and if you don't get protein through your food supply your body tissues and muscles never can be built up or repaired. In fact, you'd soon die. As for those vitamins in milk—those much-talked-of-things that no one has ever seen or tasted or touched—those vitamins keep you from having colds, bronchial trouble and a form of sore eyes, and do their part in preventing you from having rickets, bow legs and false teeth. In fact, vitamins are absolutely necessary if you are to grow normally and be your best self.

Milk contains many other valuable substances but since they may be secured equally well from various common foods, I have emphasized only three.

SECOND PERSON: [gets up and tries to steer conversation back to lighter vein]: In other words, as the high school youngster wrote, "Let the COW be a member of your family." Now really seriously, do you mean that I must *drink* milk every day?

FIRST PERSON: No, it is not necessary to *drink* milk, but for good health it is wise to *use* milk. If you don't like to drink milk, you may eat it in some cooked form and get the good things just as well as from using it raw. Eat cereals cooked in milk, milk sauces, cream soups, scalloped dishes, custards or cocoa made with milk. However, it is difficult for a growing youngster to get

enough milk in these cooked forms. Children need to *drink* milk, too. You see they need twice as much milk each day as we grown-ups.

SECOND PERSON: But I thought cooking destroyed the food value of milk. [Sits down and becomes earnest again.]

FIRST PERSON: Cooked milk may be slightly constipating to some persons, and this may cause biliousness, but that difficulty may be overcome by including some laxative foods in the same meal. Fruits, vegetables, breads and breakfast foods made from the less highly refined grains are excellent in this respect.

Raw milk helps to prevent scurvy. You know what scurvy is, don't you?

SECOND PERSON: Your gums get spongy. Your teeth get loose, you lose your appetite and you get cranky.

FIRST PERSON: That's right. Well, if milk is boiled it loses some of its power to prevent scurvy. However in the case of the grown-up who eats a mixed diet, this should cause no worry since his other fresh foods will overcome the difficulty. For the baby though, if boiled milk is fed it is necessary to add to the diet strained and diluted orange juice or tomato juice, or some other food known to prevent scurvy.

SECOND PERSON: What you say *sounds* all right, but I happen to know that Mr. Smith doesn't drink milk. How do you account for his being so healthy?

FIRST PERSON: What foods does he eat? Does Mr. Smith eat milk cooked in his other foods? And is Mr. Smith really healthy? Are his teeth sound and in good condition? Is he vigorous and energetic? Is his digestion good? Old nature doesn't always make people pay the price at once for wrong food habits.

A grown-up may obtain from eggs many of the substances that he loses from his diet by omitting milk. He may obtain from the liberal use of leaves and stems of plants, such as cabbage, onions, spinach and celery, some of the substances that he would lose through not using milk. If the water in his neighborhood is hard, he will get a little lime from that, and this will supplement what is present in his mixed diet.

Then, too, it is possible that Mr. Smith uses a great deal of butter and eats lots of cheese. If so, he is getting milk all right, but in a different form.

SECOND PERSON: What do you mean, he's getting milk all right but in a different form?

FIRST PERSON: Why, you know that butter, for the most part, is made of the fat contained in milk. It takes two and a half gallons of whole milk to make a pound of butter. And cheese is made of protein and most of the minerals contained in milk. It takes one and a quarter gallons of whole milk to make a pound of cheese.

SECOND PERSON: Well, I never had it told me just that way before. I guess Mr. Smith had that in mind when he made that remark about macaroni.

FIRST PERSON: What did he say?

SECOND PERSON: He said, "Supposing the macaroni isn't all that it should be—a small piece of cheese carried in the vest pocket, can, with a little skill be applied to the dish and thereby greatly improve the product."

FIRST PERSON [laughing]: Pretty good! I heard him say, too, that if one must drop some butter at the table, a good place to drop it is in a baked potato. That really is excellent advice, by the way.

SECOND PERSON: Perhaps you are right. I do know that Mr. Smith is a great ice-cream eater, so I suppose that helps out the dairy products cause, too.

FIRST PERSON: It certainly does—and it helps out Mr. Smith, too. From that ice-cream he obtains those energy-giving, muscle-building and growth-promoting properties of milk.

SECOND PERSON [after pause in which he seems to be thinking deeply]: Well, this talk about the food value of milk and other dairy products rings true to me, but—you know, I was always under the impression that milk and butter and cheese were expensive.

FIRST PERSON: That's because you thought only of the price paid and not of the food value received. Milk is the cheapest lime-rich food there is and cheese is the cheapest source of a very high-quality protein, while butter contains a large amount of vitamin A and is the most palatable food fat known. Many persons make the mistake of excluding milk and other dairy products from their daily food supply, yet at the same time they spend considerable money for more expensive foods that are not so completely used.

SECOND PERSON: After all, though, are these dairy products economical foods?

FIRST PERSON: Yes, they are. They require no time for preparation and they leave no waste in the form of parings or cores or bones. Milk is a complete food in early infancy; without it a youngster's growth is not all it should be. Milk should be used freely by children and grown-ups.

SECOND PERSON: Does what you say go for canned milk, too?

FIRST PERSON: Yes it does! Milk is milk and a source of real food whether you buy it as condensed, dried or evaporated milk. The difference is that much of the water has been taken out of canned milk. Some of these products are sweetened and some are not, but all of them are put up with the O. K. of the government food inspector. Yes, indeed, canned milk is a good, wholesome food. In fact, I know some folks who prefer canned cream to any other kind in their coffee.

SECOND PERSON: In other words, you'd say that the only time when it is unlucky for thirteen to sit at the dinner table is when there isn't enough milk to go around [both laugh].

FIRST PERSON [laughing and nodding his head affirmatively]: Yes, and if one of the thirteen spills his milk the thing to do is to weep and ask for more.

And another thing, milk absorbs odors and flavors readily. An open bottle of milk will soon taste of onions, fish, fruit or any other penetrating odor that is near. So it is a good idea to keep in mind that slogan, "Cool, covered and clean."

SECOND PERSON: But [getting serious again] how do you *know* that milk will make one grow?

FIRST PERSON: A great many experiments have been performed on rats, on chickens, on pigs, and on calves to show the effect of milk on growth. In addition to this, other experiments have been carried on in schools where children who receive no milk in the home have been given milk and the good effects have been noted.

SECOND PERSON: How much milk ought we to use?

FIRST PERSON: If possible, a child should receive a quart of milk a day. Group-ups can manage on a pint a day, however.

SECOND PERSON: Isn't the recommendation of a quart of milk a day just some one's pet idea, or the desire of the dairy industries to advertise?

FIRST PERSON: No, indeed, the recommendation of a quart of milk each day for every child is based on scientific experiments. Perhaps the most striking experiment was performed by Dr. H. C. Sherman of Columbia University. He found that the use of one quart of milk a day supplied a sufficient amount of the proper kind of lime for the teeth and bones of the body. Then he tried using only one pint of milk a day, replacing the other pint of milk with a quantity of vegetables supplying the same amount of calcium as the milk. But the

results were not satisfactory. This does not mean that liberal amounts of vegetables should not be used, but it does mean that they should be used *in addition to the milk* and not in place of it.

SECOND PERSON: But a quart of milk is an awful lot to drink. What can a person do when a child says he has "no room" for other food if he has a quart of milk a day?

FIRST PERSON: Well, I'd say, have him examined by a doctor. If a child who is normally active cannot take other essential foods when about six hundred and seventy-five calories of his diet are furnished by milk, he must not be well. Remember, of course, that some of the quart of milk should be used in other foods; a youngster does not need to take more than two glasses of it as a beverage if he has cereal with milk, creamed soups and other foods cooked with milk.

SECOND PERSON: From what you said a while ago, I judge it isn't such a serious matter about grown-ups having milk each day, is it?

FIRST PERSON: Yes, the same rule applies to them. Since they are grown, their bones and teeth do not require such large deposits of lime as children's do, but they do need lime for many other functions of the body. Milk is the best possible foundation for an adequate diet for any one. A single glass of milk contains more than 150 calories of energy.

SECOND PERSON: How valuable is skim milk?

FIRST PERSON: Skim milk has the protein and lime and one of the vitamins for which milk is particularly valuable. The other vitamin is mostly in the fat, but it is found in green vegetables, egg yolk, cod-liver oil and butter.

SECOND PERSON: Could one live on milk alone?

FIRST PERSON: Not successfully after the first half year. Milk lacks sufficient iron to supply human needs. A tiny baby should have stored in its body a surplus of iron to last it for about the first six months of its life. Then it must be given some food other than milk, food that contains some iron, otherwise there is serious danger of the baby becoming anemic. You were so well posted on what scurvy is, that I suppose you are equally well informed about an anemic condition.

SECOND PERSON: You are right, as usual, of course. I do know the signs of anemia—pale skin due to lack of "r-b-c's." You know what "r-b-c's" are, don't you?

FIRST PERSON [looks puzzled]: Um-m, what are they?

SECOND PERSON: Red blood corpuscles, of course [both grin]. Besides having a pale skin, the anemic person is liable to become listless and have a fluttery heart. [Pause.] But I have another question right along this line about adding something to a milk diet. What do you say about bread and milk as a meal?

FIRST PERSON: Fine. The combination of whole-wheat bread and milk makes an excellent meal. If, however, all three meals every day were to consist of these two foods only, the body would still lack vitamin C, because milk is not very rich in this vitamin and it is not found at all in cereals. To supply it, fruit, especially oranges or grapefruit, should be added to the bread and milk diet, or vegetables, cabbage, turnips and tomatoes should be used in generous quantities. *Then*, I'd say the bread and milk meal is all right. [Looks at wrist watch.] Good gracious it's 5:30. I must be on my way home to dinner. [Stands up.]

SECOND PERSON [also looks at watch and gets up from chair]: And so must I. I'll say this for you—you are quite convincing with all your knowledge of nutrition and I shall not forget that a quart of milk every day will add just as much to my face value as a good wash and a hair-comb. [Both laugh and go off stage together.]

SUGGESTION NO. 4

Refreshments

For light refreshments serve ice cold milk drinks or hot cocoa with cheese sandwiches. (Select sandwiches from recipe slip.) A lettuce salad with cottage cheese salad dressing (see recipe slip) may be suited to the group and the occasion. If a salad is decided on, serve with it buttered slices or butter sandwiches made from the soft graham loaf (see recipe slip).

For a dairy products meal, select any one of the menus suggested below. Large-quantity recipes for any one of these dishes may be obtained from the Extension Service, Oregon State Agricultural College, Corvallis, Oregon.

Corn chowder

Toasted bread or crackers sprinkled with grated cheese

Potato salad made with lettuce-celery-onion-pepper

Cheese sandwiches*

Prune pudding Chocolate cookies

Coffee Cream

Milk or cocoa for children

Meat loaf

Creamed potatoes and peas

Cold slaw

Bread Butter

Sliced oranges and cocoanut

Cream cheese cake*

Coffee Cream

Milk or cocoa for children

Scalloped cheese and rice

Buttered string beans

Sliced tomatoes

Whole wheat bread Butter

Chocolate pudding with hard sauce*

Coffee Cream

Milk or cocoa for children

Cheese fondue

Buttered string beans or asparagus

Carrot-cabbage salad or sliced tomatoes

Graham bread Butter

Ice-cream or canned fruit

Butter cookies

Coffee Cream

Cocoa or milk for children

*Small-quantity recipe for this dish shown on recipe slip.