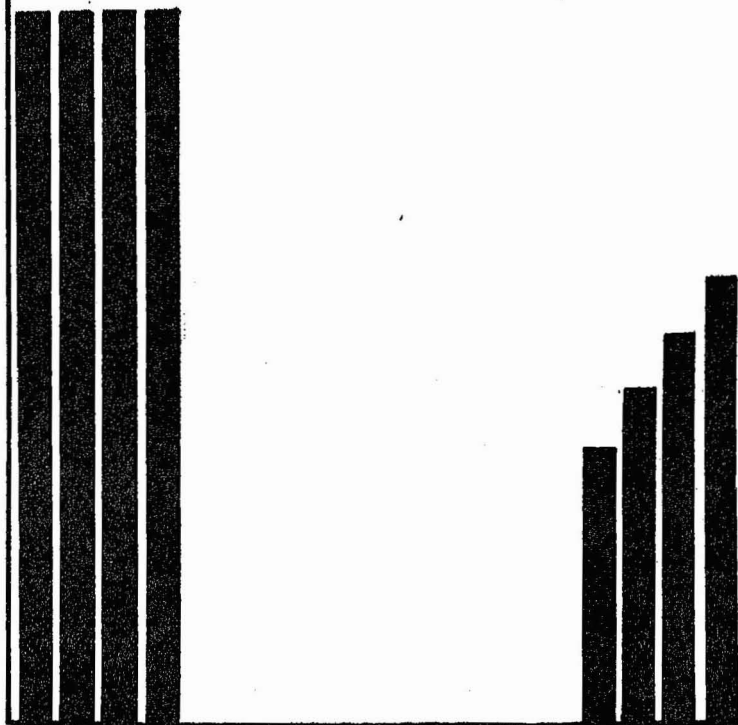


CEREALS

IN THE
LOW COST DIET



MONTANA STATE COLLEGE
EXTENSION SERVICE
BOZEMAN

Cereals must always play a large part in low cost meal planning because they are our cheapest, most plentiful food. When the family must exercise strict economy, the market order should include a generous supply of the various cereal products. Cereals to most people mean only breakfast foods but the classification properly includes all the breadstuffs and by-products manufactured from the cereal grains, and includes such things as macaroni and spaghetti. An understanding of their composition and skill in preparing them are necessary if the low cost dietary is to prove both adequate and palatable.

Cereals In The Low Cost Diet

By

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I. COMPOSITION AND FOOD VALUE OF CEREALS

Cereals are seeds of cultivated grasses used for food. The most important ones are wheat, corn, rice, oats, rye and barley. As seeds which will germinate and nourish a new plant, they represent a concentrated food supply. These seeds are all constructed somewhat alike, each grain consisting of: (1) the bran coat or horny outer layer, (2) the embryo or germ, and (3) the endosperm or soft starchy inner portion.

The **bran** coat makes up about 13% of the grain. It contains most of the mineral, some protein and some Vitamin B. It is also high in cellulose, an indigestible substance which adds desirable bulk and roughage to the diet of normal persons when eaten along with the rest of the grain in the form of whole cereals.

The **germ** makes up about 5% of the grain. It contains a tiny new plant in embryo. The germ is high in the antineuritic Vitamin B, wheat germ being especially valuable in this respect. The germ contains an oil, some mineral, and in some grains a small amount of Vitamin A.

The **endosperm** makes up about 82% of the grain. This is the white starchy looking part which is high in carbohydrate and contains some protein. It is the stored food supply for nourishing the newly germinated plant. This part of the grain goes into our highly milled and refined flours.

II. WHOLE GRAIN VERSUS REFINED CEREAL PRODUCTS

Cereal will be good or poor sources of the important body-building minerals and vitamins depending on how much of the bran and germ of the grain are retained in the finished product. True "whole grain" products contribute vitamins and minerals as well as calories to the diet; refined white flours contribute very little except calories.

The simplest milling process consists of crushing or grinding the whole grain so that the resulting meal or flour contains all of the components of the original unground seeds. This makes a true "whole grain" product.

Plain ground whole wheat and oatmeal are whole grain products. Unfortunately, the germ due to its oily content becomes rancid on storage and is liable to insect infestation, so whole grain products are perishable. Many so-called "whole grain" products have had the germ removed. This germ is sometimes sold separately and used to reinforce otherwise inadequate dietaries. Thus rice polishings and wheat germ are available in some milling centers. There are some vitamin preparations on the market which are essentially germ extracts. They are valuable where whole grain products are not available or not well tolerated.

Due to the semi-perishable nature of the whole grain, the bulk of it is put through complicated milling processes which remove the bran and germ, and as a result we have various grades of refined flour and such by-products as bran and shorts. These by-products are processed and enter into the manufacture of many breakfast cereals.

III. PLACE OF CEREALS IN THE DIET

1. Refined grain products are cheap sources of energy and protein but are poor in minerals and vitamins. Whole grain products are good sources of antineutritic Vitamin B, contain some Vitamin A, are good sources of the important minerals phosphorus, iron, copper and manganese and contain some calcium.

2. The more highly the cereal is milled the more necessary it is to supply minerals and vitamins from other sources.

3. When the diet allows a liberal use of vegetables, fruits, eggs, meat and milk one may use any type of bread or cereal he prefers.

4. When every penny must count, when cereals make up the bulk of the diet and the supply of vegetables, fruit, eggs, meat and milk are definitely restricted it is important that whole grain cereals be used at least once a day.

5. Where wheat germ is available one pound of this for every 25 lbs. of flour or cereal used reinforces the vitamin and mineral content of the diet considerably.

6. Cereals, like eggs and meat, are acid forming foods. A favorable balance should be maintained by the use of the alkaline residue foods: milk, vegetables and fruits.

7. Whole grain cereals add desirable bulk to the diet. Their fiber and vitamin content give whole cereals laxative properties. They are valuable to supplement milk, eggs and other concentrated foods which are lacking in cellulose or fiber.

8. Coarse bran is very apt to be too irritating to the intestinal tract. Much harm can be done by its indiscriminate use. Bran is best eaten not as a separate product, but along with the rest of the grain, in the form of whole grain cereals and whole grain flours.

9. Cereals are given to babies in small amounts as early as six months. They should be very well cooked and strained to remove all rough particles. Children should have well-cooked unstrained cereal at least once a day. (See Infant Care, Children's Bureau Pub. No. 8). Cereals for invalids and persons with delicate digestive tracts should likewise be strained.

10. Children should be trained to appreciate the bland, nutty flavor of well cooked cereals. Much sugar masks this bland but agreeable flavor and this monotonous sweetness results in a tendency to tire of it. Sugar dulls the appetite. Children are very apt to feel satisfied after eating cereal heavy with sugar, and may refuse other important foods in the meal for this reason. They will learn to appreciate the nutty flavor of well cooked cereal served without sugar if they are not allowed to form the sugar habit first.

IV. SERVE CEREALS IN SOME FORM

THREE MEALS A DAY

1. Cereals can be used three times a day in the form of breakfast foods, breads, main dishes and cereal desserts.

2. Cereals are valuable as "extenders" of more highly flavored foods particularly meat, cheese and tomatoes. A little meat or cheese will add flavor to a large amount of cereal in meat substitute dishes.

3. To avoid monotony serve a variety of cereals and serve them in a variety of ways. Breakfast cereals can be varied with raisins, dates, figs, prunes, bananas, cocoanut, baked apple, etc. Use whole cereals in breads, muffins, waffles, hot cakes, cereal puddings, meat substitute dishes, and even salads.

V. RELATIVE COST OF CEREALS

1. Home manufactured cereals are the cheapest, especially if the grain is home grown. A pound of whole wheat makes 5 or 6

servings of breakfast food at a cost of 1 cent, when wheat sells for 60 cents per bu.

2. The "ready-to-eat" cereals are by far the most expensive ones per serving. Every manufacturing process adds to the retail price.

3. The raw cereals which require cooking before serving are the cheapest. Despite the fuel required to cook them they are much cheaper than the cheapest "ready-to-eat" cereal.

4. Bulk cereal is cheaper than the same product packaged. It is clean and wholesome if properly handled.

VI. HOW TO COOK CEREALS—GENERAL DIRECTIONS

1. **Flavor**—Well cooked cereals have a characteristic smooth texture and nutty flavor. They should not be lumpy, gummy or sticky. They may be thick or thin according to individual preference but should always be well cooked, which means "long cooked." Cooking softens the cellulose, bursts the starch grains making the starch more available, and develops the flavor. Some people do not know what good cereal really tastes like, being familiar only with a raw, pasty, flavorless mixture which they attempt to make edible by masking with sugar.

2. **Salt**—All cereals require salt. One teaspoonful of salt for each cup of dry cereals is a safe rule.

3. **Milk**—Cereal cooked in milk has a particularly nice flavor and added nutritive value. Slightly more liquid will be required than if water is used.

4. **Liquid**—Use 2 to 6 cups of liquid for each cup of dry cereal. Coarse, granular cereals require the least, finely granulated ones the most.

5. **Cooking Time**—Coarse, granular cereals require longest cooking. Cracked wheat, oatmeal and hominy require 2 to 3 hours; finer granular ones such as cornmeal and rolled oats require about one hour and "quick" cereals from 5 to 30 minutes. Cereal for infants should be cooked even longer.

6. **Texture**—Cereals should be added to the boiling salted liquid so gradually that boiling does not stop. This is an important point in avoiding a sticky, gummy quality. Constant stirring develops "stickiness" but finely granulated cereals must be stirred to insure smoothness.

7. **Watching**—Cereals cooked over direct heat need careful watching to prevent sticking and scorching. (An asbestos mat is useful). To avoid this trouble cook cereal in a double boiler. Add

the cereal to the boiling salted water as directed above. Allow it to boil 5 minutes over direct heat or long enough to take care of the swelling and insure smoothness. Place over the boiling water and allow time for long, slow cooking. Salt added to the water in the bottom of the double boiler reduces the cooking time somewhat.

8. Saving Time and Fuel

- (a) Soak coarse granular cereals overnight in required amount of water. Then cook on top of stove on an asbestos mat 30 minutes or until done, and no uncooked flavor remains.
- (b) Use fireless or pressure cookers. However, pressure cooker temperatures have a destructive effect on the antineuritic Vitamin B.
- (c) For economy of fuel and convenience in use, some cereals such as whole wheat can be cooked in large quantities and stored in a cold place for several days, to be reheated as used. It is always cheaper to cook a given quantity at one time than in small amounts.
- (d) Cereals may be cooked in quantity and canned for future use. Pack the hot, well-cooked cereal in clean, hot, pint jars or No. 2 tin cans and process one hour at 10 lbs. pressure.

VII. HOW TO COOK UNGROUND CEREALS— SPECIAL DIRECTIONS

Whole Wheat

- (a) **On top of stove**—For each cup of cleaned wheat add $1\frac{1}{2}$ cups of water and soak overnight. In the morning add 3 cups of water and a teaspoon of salt for each cup of dry wheat used. Boil gently for $3\frac{1}{2}$ hours or more or until tender and no uncooked starchy flavor remains. Add water if needed during the cooking.
- (b) **In Steamer**—In the morning drain the soaked wheat prepared as above. Arrange it in a thin layer in the upper part of a steamer. Steam for at least $3\frac{1}{2}$ hours over boiling water. Sprinkle with salt just before serving.
- (c) **In fireless cooker**—Prepare soaked wheat as in (a) above. In the morning add 1 cup of water and 1 teaspoon salt to each cup of dry wheat used. Place in a fireless cooker container and bring to a boil over direct heat. Cover and place in the cooker between hot stones. After 3 hours reheat the stones and cook $2\frac{1}{2}$ hours longer.
- (d) **In pressure cooker**—Prepare soaked wheat as in (a) above. In the morning add 1 cup of water and 1 teaspoon salt for each cup of dry

wheat used. Place pan on rack in the pressure cooker with the correct amount of water in the bottom of the cooker. Cook 1 hour or longer at 20-25 lbs. pressure.

Note: Wheat is a very satisfactory product to cook in quantity and process as directed in 8, page 7-(d).

Rice—Cook According to Use

1 c white rice

2 qts. boiling water

2 t salt

Look the rice over to remove any foreign materials, wash in hot water and drain. Add to the rapidly boiling, salted water gradually. When all has been added reduce the heat to maintain gentle boiling, and cook with the utensil uncovered until the rice grains are tender (until no hard center is felt when a grain is pressed between the thumb and finger). Drain at once, and rinse by pouring hot water through the rice on a colander or sieve to remove loose starch and separate the grains. Drain. The rice should be well cooked with the grains whole and free from stickiness.

Reheat rice for serving by steaming it in a colander or sieve over boiling water steaming only long enough to heat through. Rice for two days' servings can be boiled at one time and reheated easily when needed. Rice cooked in this way is eaten as a cereal or as a meat accompaniment instead of starchy vegetable.

A softer, more moist product may be obtained by cooking rice in a double boiler, fireless cooker, or waterless cooker, using about two volumes of water to one of rice. Rice so prepared is desirable for croquettes, patties, rice ring, and any dishes in which rice grains are to be held together.

One cup of uncooked rice yields about $3\frac{1}{4}$ cups boiled rice.

Brown Rice—Japanese Style

1 c brown rice

$3\frac{1}{2}$ c cold water

$1\frac{1}{4}$ t salt

Grease a stew pan with butter. Put salt in the water, add the rice bring slowly to the boiling point and cook 20 minutes without stirring. Cover the pan, reduce the heat and let the rice steam 20 minutes or until it is entirely soft. The rice will not stick if heat is correctly regulated. Each grain will be separate and distinct. All the water will be absorbed and none of the valuable food elements lost. Brown rice may be cooked in a double boiler after first starting in boiling water, or it may be steamed over hot water.

VIII. HOME-MADE CEREALS

Whole Wheat—Unground

Sort the wheat grain and wash thoroughly. Drain well and dry thoroughly by spreading on shallow pans in a warm place. Cook as directed on page 7.

Cracked Wheat

Prepare wheat by washing and drying as above. Grind it in a hand mill or coffee grinder. Grind it twice for a fine meal suitable for muffins. Coarse meal is suitable for breakfast porridge. Cracked wheat cooks more quickly than whole grains. Cook according to General Directions on page 6.

Wheat and Rye

Mix 2 parts of wheat and one part of rye. Clean and cook the whole grain exactly as for whole wheat alone. It should be cooked till the kernels burst open and are entirely soft.

Wheat Hominy

Put 1 qt. of clean wheat in a kettle (do not use tin or aluminum), cover with water about 1½ inches. Bring to a boil, add one teaspoon of lye. (Lye is a strong chemical. The hands should not touch the lye water nor the hominy till it has been washed 4 or 5 times. Then it is best to wear rubber gloves. The kettle should be carefully washed so the lye solution is entirely removed. Use a wooden paddle for stirring and use an enamel or agate or iron pan; never use tin or aluminum). Allow to boil 25 or 30 minutes or until a few grains look dark. Drain off the lye solution. Do not allow the water to touch the hands and be careful how it is discarded. Wash the wheat in 10 or 12 changes of cold water. The grains will be hulled and twice their original size. Cover with water. Salt it and let boil tender or about 1 hour. One quart of wheat makes 2½ qts. of hominy. Serve hot as a cereal with milk, or cream, seasoned with butter, salt and pepper as a supper dish, or with sweet sauce as a dessert. It can substitute for cooked whole wheat in recipes. This prepared wheat is the foundation of "Frumenty," and old English dish.

Note: Wheat hominy lacks the vitamin and mineral content of whole wheat but is valuable for those who find whole wheat too irritating.

Lye Hominy or Hulled Corn

Use clean, sound, large-kerneled corn. Dissolve 1 ounce of lye (observe same precautions for using lye as when making Wheat Hominy) in 5 cups of cold water. Stir in 1 qt. of corn and let it stand 15 hrs. Wash thoroughly in lots of water to remove the lye and the hulls. Rubbing the hominy in a cloth bag helps to take off the hulls. When the washing is finished the hull and black tip should be off and the kernel should look clean. The slight discoloration which the lye causes may be removed by soaking the hominy overnight in water to which a little salt has been added. Parboil the corn in several changes of water to remove any traces of lye. Then cover with water, add 1 T salt and cook till done (3 or 4 hours). Be sure corn is covered with water during cooking. One quart of corn makes 3 or 4 qts. of hominy.

Note: Use hominy as a breakfast cereal; as a meat accompaniment instead of a starchy vegetable, in meat substitute dishes, or in cereal puddings, etc.

Grainola

(Missouri's home-made "ready-to-eat" cereal)

3 c rolled oats	2 T salt
3 c cornmeal	$\frac{1}{4}$ c sugar
3 c whole wheat flour	1 or 2 qts. whole milk
3 c white flour	

Mix dry ingredients and add milk to make a stiff dough. Roll into thin sheets like pie crust. Prick with a fork. Bake in a hot oven till golden brown. Grind up and serve with cream and sugar.

Note: Popcorn, whole or coarsely ground, is another popular home-made, ready-to-eat cereal. Bread toasted till thoroughly dry is also used. It should not be allowed to get too dark. A light golden color is preferable.

Cereal Coffee

1 egg	1 c honey or molasses	2 qts. wheat bran
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Beat the egg, add the honey and lastly the bran and stir till well blended. Put in the oven and brown till dark brown, stirring frequently, being very careful not to scorch. To prepare the coffee allow one heaping T. to each cup of hot water and boil for at least 10 minutes.

A good cereal coffee can be made with ground wheat, browning it slowly in the oven, with or without the addition of molasses. The beverage is prepared as directed above.

IX. USE WHOLE CEREALS IN BREADS AND QUICK BREADS

Entire-wheat Bread No. 1

2 c scalded milk	2 t salt
$\frac{1}{4}$ c sugar or $\frac{1}{2}$ c molasses	1 yeast cake dissolved in $\frac{1}{4}$ c lukewarm water
4- $\frac{3}{4}$ c wholewheat flour	

Add sweetening and salt to milk; cool, and when lukewarm add dissolved yeast cake and flour; beat well, cover and let rise to double its bulk. Again beat and turn into oiled bread pans, having pans one-half full. Let rise and bake. Entire-wheat bread should not quite double its bulk during last rising. This mixture may be baked in gem pans.

Entire-wheat Bread No. 2

1 qt. milk	1 T salt
1 cake compressed yeast	3 T honey, molasses or brown sugar
2 qts. whole wheat flour	
3 T butter	

Dissolve salt, honey and butter in scalded milk. Cool to lukewarm and add yeast cake dissolved in $\frac{1}{4}$ cup lukewarm water. Add the flour and knead well. Shape into loaves and put into oiled tins. Place in a warm place to rise. When almost double in bulk, bake about one hour in a moderate oven.

POINTS IN BAKING BREAD

Five-hour bread is the ideal. In order to obtain this the temperature must be watched to keep the conditions favorable for yeast growth. Bread that is allowed to get too light or to stand too long to raise is apt to be not only of poor texture but also sour.

1. Scald milk to destroy acid-forming bacteria if present.
2. Cold to luke warm.
 - (a) Test for luke warm: use a thermometer which should register 98° F. or
 - (b) Place drop of milk on wrist. If its presence cannot be felt it is the right temperature.
3. Warm flour if it is cold so as to keep temperature favorable for growth of yeast.
4. Bread should be placed in a warm place, free from drafts. Whole wheat bread should not be too light. Let rise until not quite double in bulk. Over-light whole wheat bread is too coarse in texture.
5. Bake in a moderate oven for one hour or more. Whole wheat bread requires longer time for cooking than white bread. Temperature 400-420° F. for the first 15 minutes and reduce to 365°. If a thermometer is not available test oven heat by spreading 1 t. flour $\frac{1}{4}$ inch thick on a small tin (jelly glass lid) and setting this in the oven. It should brown throughout in five minutes for bread. Bread should rise slightly the first 20 minutes and just begin to brown; during the second 20 minutes continue to brown and during last 20 minutes continue to brown and shrink from sides of pans.
6. After baking, remove loaves from pans on a bread cooler or arrange in such a way that the air may reach them on all sides. When cool, place in a covered tin box.

Boston Brown Bread

1 c whole wheat flour	1 t salt
1 c cornmeal	2 c sour milk
1 c rye flour	$\frac{3}{4}$ c molasses
$1\frac{1}{4}$ t soda	$\frac{1}{2}$ c raisins or nuts or both
1 t baking powder	as desired

Mix dry ingredients thoroughly. Add sour milk and molasses and beat thoroughly. Turn into well-buttered pound baking powder cans. Cover tightly and steam 3 to 3½ hrs. Remove cover and dry in oven 15 minutes. Take from cans and slice with a string. Never fill the cans more than $\frac{2}{3}$ full. Tie down the cover to prevent the bread in rising from forcing it off. Place cans on trivet in boiling water. Allow water to come $\frac{1}{2}$ way up around mould. Cover closely. Add more water if needed. When cooked remove from water, remove lid and place in the oven to dry slightly. The recipe makes 4 one-pound loaves.

Note: A pressure cooker with lid unlocked and petcock open is an excellent utensil for steaming breads and puddings.

Brown Nut Bread

$\frac{1}{2}$ c molasses	$1\frac{1}{2}$ c white flour
1 t soda	1 t salt
2 c sour milk	$\frac{1}{2}$ c sugar
2 c whole wheat flour	1 c chopped nuts

Mix and sift the dry ingredients. Add molasses and milk to the dry ingredients, beat thoroughly. Add nuts. Fill oiled baking powder cans half full, cover with an oiled cover and let stand $\frac{1}{2}$ hour. Bake three-quarters of an hour in a moderate oven.

Wheat Nut Bread

3 c whole wheat flour	4 t B. P.
$\frac{1}{2}$ c sugar	1 egg
$1\frac{1}{2}$ t salt	1 c sour milk
$\frac{1}{2}$ t soda	$\frac{3}{4}$ c peanut butter

Mix dry ingredients. Add peanut butter and blend in as for pie crust. Beat egg and add to milk. Turn into dry ingredients and mix well. Turn into well greased pan and let stand 20 min. Bake 1 hr. at 350° F.

Montana Quick Bread

3 c whole wheat flour	1 egg
$\frac{1}{2}$ c sugar	$\frac{1}{2}$ c molasses
$\frac{1}{2}$ c salt	2 c buttermilk or sour milk
$1\frac{1}{4}$ t soda	1 c raisins or nuts or both

Mix as for Nut Bread above. Bake 40 to 50 minutes in oiled pans or baking powder cans. For sweet milk use 4 t. B. P. and $\frac{1}{4}$ t. soda.

Whole Wheat Muffins No. 1

$\frac{7}{8}$ c white flour	$1\frac{1}{4}$ c whole wheat flour
4 t B. P.	1 egg
2 T sugar	1 c milk
$\frac{1}{2}$ t salt	2 T melted fat

Sift white flour, B. P., salt and sugar together thoroughly and mix well with whole wheat flour. Beat egg, add milk and melted fat. Turn in dry ingredients, combine quickly and turn into greased muffin tins. Bake 20 minutes in a quick oven. Fat and sugar may be increased up to 4 T for a sweeter richer muffin.

Note: Do not overbeat muffins. Stir only till ingredients are wet. Stop beating while mixture still looks rough.

Whole Wheat Muffins No. 2

1 c sifted flour	2 t baking powder
$\frac{1}{2}$ t salt	1 egg
1 c cooked whole wheat un-	$\frac{1}{2}$ c milk
ground	1 T fat (melted or liquid)

Sift the dry ingredients together, add the wheat, and mix thoroughly.

Beat the egg, add the milk, and stir into the dry ingredients with the fat. Pour into greased muffin pans and bake in a moderate oven about 30 minutes. Serve hot.

Rolled Oats Muffins

2 c rolled oats	$\frac{1}{4}$ c sugar
$1\frac{1}{2}$ c sour milk	1 t soda
1 egg well beaten	$\frac{1}{2}$ t salt
4 T melted fat	1 c flour

Soak oats in sour milk over night. In the morning add the beaten egg and melted fat, then the dry ingredients sifted together. Bake in a hot oven 20 minutes. With sweet milk use 4 t. B. P. and omit soda.

Oatmeal Muffins No. 2

(Using left-over cereal)

1 c cold cooked oatmeal	$\frac{1}{2}$ t salt
$1\frac{1}{2}$ c flour	$\frac{3}{4}$ c milk
4 t baking powder	1 egg
2 T sugar	2 T butter
$\frac{1}{2}$ c raisins	

Add $\frac{1}{2}$ the milk to the cereal and mix till smooth. Sift flour, baking powder, sugar and salt together well. Beat egg slightly, add rest of milk, cereal and melted fat. Turn in dry ingredients and stir till just moistened. Do not overheat. Bake in oiled muffin tins in a hot oven 20-25 minutes. This is a good way to use left-over cereals.

Bran Muffins

1 c flour	$\frac{1}{2}$ t salt
$1\frac{1}{2}$ c bran	3 T brown sugar
4 t baking powder	1 egg
3 T fat	1 c milk

Sift dry ingredients together thoroughly. Add the bran. Beat the egg, add the milk and the melted fat. Turn in the dry ingredients. Combine quickly and turn into greased muffin rings. Bake 20 minutes in a quick oven. To substitute sour milk use $\frac{1}{2}$ t soda and 2 t baking powder.

Corn Meal Muffins

$1\frac{1}{2}$ c flour	$\frac{3}{4}$ c cornmeal
4 t baking powder	1 egg
2 T sugar	1 c milk
$\frac{1}{2}$ t salt	3 T fat

Sift dry ingredients together thoroughly. Beat egg, add milk and melted fat. Combine quickly, turn into greased muffin tins and bake 20 minutes in a quick oven.

Corn Bread

2 c corn meal	$1\frac{1}{2}$ t salt
2 c sour milk	2 eggs
2 T butter	1 t soda
2 T sugar (white or brown)	1 T cold water

Method No. 1: Cook the milk, meal, salt, butter and sugar in a double boiler for about 10 minutes. When the mixture is cool add the well beaten eggs and the soda dissolved in 1 T cold water. Bake in a shallow iron or granite pan for about 30 minutes.

Method No. 2: Mix and sift all dry ingredients including soda. Beat eggs, add sour milk and melted fat. Combine wet and dry ingredients, beat smooth and bake as above.

Note: The first method requires more time than the second method but the bread will be of much better texture.

Spoon Bread

1 c corn meal	2 eggs
1 c water	1 t salt
2 c milk	2 T melted fat

Cook the meal, salt, 1 c of the milk and the water till smooth and thick (about 10 minutes). Add the remaining cup of milk, the well beaten eggs and the melted fat. Bake in a well greased baking dish in a hot oven for 25 minutes. Serve from the same dish. The egg whites may be beaten separately and folded in last, making a little different textured product.

Note: Spoon Bread is eaten with butter or gravy as a meat accompaniment in place of potato, or with cream as a cereal. One cup of cooked rice or cooked wheat is a nice addition to this recipe.

X. USE WHOLE CEREALS IN SIMPLE DESSERTS

Baked Creamy Rice Pudding

$\frac{1}{2}$ c uncooked rice	$\frac{1}{2}$ t nutmeg, cinnamon or
1 qt. milk	grated lemon rind
$\frac{1}{2}$ c sugar	$\frac{1}{2}$ t salt

Wash the rice, add to the remaining ingredients, and stir the mixture. Pour into baking dish and bake 3 to 5 hours in a slow oven (285-295°F.). Stir three or four times during the first hour. Three-fourths cup of raisins may be added if desired when the pudding begins to thicken. The creaminess and delicious flavor of this pudding result from long, slow cooking. If raisins are added sugar should be decreased. Serve warm or cold with top milk, cream or a vanilla sauce.

Whole Wheat Pudding

2 c hot milk	$\frac{3}{4}$ c chopped seeded raisins
2 c cooked whole wheat	1 egg
$\frac{3}{4}$ t salt	$\frac{1}{2}$ t vanilla
2 to 4 T sugar	

Mix milk, wheat, salt and sugar. Add raisins, beaten egg and vanilla. Pour into baking dish and bake in moderate oven about 30 minutes or until set. Chill before serving. Serve with top milk or cream.

Oatmeal Pudding

2 c oatmeal cooked	$\frac{1}{4}$ c sugar
1 c milk	2 eggs
$\frac{1}{2}$ c raisins	1 t salt

Mix oatmeal, milk, raisins, sugar, beaten egg yolks and salt. Fold in beaten egg whites. Bake in a moderate oven till set. Serve with milk, cream or any desired sauce.

Frumenty

(An old English Dish)

Stir 1 pt. of wheat mush (hominy) over the fire with 2 pts. of milk till it is smooth and thick. Add 2 oz. of mixed currants and raisins. When the fruit is very tender stir in the well beaten yolks of 3 eggs, sugar, cinnamon and nutmeg to taste. Serve cold. Frumenty is made differently in different localities. This is Lincolnshire Frumenty. It is a traditional Christmas Eve dish.

Hominy Pudding

2 c wheat hominy	1 beaten egg
$\frac{3}{4}$ c chopped dates or raisins	$\frac{1}{4}$ t salt
$\frac{3}{4}$ c molasses	Juice of $\frac{1}{2}$ lemon
1 c milk	

Mix ingredients and put into buttered custard cups or baking dish set in hot water. Bake in a moderate oven till set. Serve with milk, cream or any desired sauce.

Indian Pudding

1 qt. scalded milk	1 t salt
5 T cornmeal	$\frac{1}{2}$ t ginger (if desired)
2 T butter	2 eggs
1 c molasses	1 c cold milk
$\frac{3}{4}$ t cinnamon	

Add meal gradually to scalded milk, stirring constantly. Cook 15 minutes in a double boiler. Add butter, molasses, seasonings and eggs well beaten. Turn into a buttered pudding dish and pour on cold milk. Bake in a moderate oven 1 hour. Serve plain, with milk or cream. Indian pudding is said to have been one of George Washington's favorites.

Steamed Whole Wheat Pudding

$\frac{1}{4}$ c butter	1 egg
$\frac{1}{2}$ c molasses	1 $\frac{1}{2}$ c whole wheat flour
$\frac{1}{2}$ c sour milk	$\frac{1}{2}$ t soda
1 c chopped raisins, dates or figs	$\frac{1}{2}$ t salt

Mix liquid ingredients and beaten egg. Combine dry ingredients and floured raisins. Mix well and turn into a buttered mould and steam 2 $\frac{1}{2}$ hours (or 1 hr. in buttered 1 lb. baking powder tins). Serve with lemon sauce or hot molasses.

Chocolate Rice Pudding

2 c milk	1 sq. chocolate
$\frac{1}{4}$ c rice	1 t vanilla
$\frac{1}{8}$ t salt	2 eggs
1 T butter	$\frac{1}{2}$ c sugar

Scald milk, add salt and rice and cook in a double boiler till rice is soft. Add the butter, sugar, melted chocolate, beaten egg yolks and vanilla. Fold in the beaten egg whites just before serving. Serve with plain or whipped cream.

Fruit Pudding

2 c breakfast food cooked	2 c canned fruit, drained
1 c milk	1 c sugar
1 egg white	

Heat the breakfast food and milk in a double boiler. Beat till smooth and creamy. Fold in the egg white, well beaten. Cook two minutes. Place the fruit in a serving bowl. Cover with sugar. Pour over the cereal mixture. Serve with cream. If fruit is quite sweet reduce the amount of sugar.

Rice Dainty

$\frac{3}{4}$ c cooked rice	$\frac{3}{4}$ c fruit cut into pieces
$\frac{1}{4}$ c powdered sugar	$\frac{1}{4}$ c cream whipped

Mix rice, fruit and sugar, then fold in the whipped cream. Pineapple shredded or diced, bananas cut into pieces (not sliced), dates seeded and cut into pieces or cooked apricots are desirable fruits for dessert.

Cereal Apple Sauce Pudding

2 c cooked cereal	2 eggs
1 c apple sauce	2 T brown sugar
1 t cinnamon	

Beat egg yolks, add sugar, cinnamon, cereal and apple sauce. Fold in beaten egg whites. Put in greased baking dish and bake in a moderate oven till brown. Serve with cream or lemon sauce.

Cereal Prune Pudding

2 c cooked cereal	1 T lemon juice
1 c cooked pitted prunes	3 egg whites beaten
3 T sugar	1 t cinnamon

Mix fruit, cereal, sugar, lemon juice and cinnamon. Fold in beaten egg whites and put into a greased pudding dish. Bake $\frac{1}{2}$ hr. in a moderate oven. Serve with custard sauce.

Custard Sauce

3 egg yolks	$\frac{1}{2}$ t vanilla
$1\frac{1}{2}$ c milk	Pinch salt
4 T sugar	

Beat egg yolks, sugar and salt. Slowly add scalding milk. Cook over hot water till the mixture coats the spoon. Remove from heat immediately. Add vanilla. Serve hot or cold.

Glorified Rice Pudding

$\frac{1}{2}$ lb. dried apricots	$\frac{1}{4}$ c sugar
3 c cooked rice	$\frac{1}{4}$ c honey
18 to 24 marshmallows	Cream

Soak apricots overnight in water to cover. Next morning simmer till tender and add sugar and honey to taste. Arrange a layer of half the hot rice, apricots and marshmallows in a buttered baking dish, let marshmallows brown, then add another layer and let brown on top. Serve hot or cold with cream.

Whole Wheat Cookies No. 1

$1\frac{1}{2}$ c sifted flour	$\frac{1}{2}$ c fat (melted or liquid)
$\frac{3}{4}$ t salt	$\frac{1}{2}$ c chopped raisins
$\frac{1}{4}$ t cinnamon	$1\frac{1}{2}$ c ground whole wheat
$\frac{1}{4}$ t nutmeg	1 egg
$\frac{3}{4}$ c brown sugar	6 T milk

Sift the flour, salt and spices. Mix the sugar with the fat and the raisins with the cracked whole wheat. Put all of these ingredients together and add the beaten egg and the milk. Stir until well mixed. Drop by teaspoonfuls, about 2 inches apart, on greased pans. Bake in a moderately hot oven ($375-400^{\circ}\text{F.}$) from 10 to 12 minutes or until slightly browned.

Whole Wheat Cookies No. 2

$\frac{3}{4}$ c sifted flour	$\frac{1}{2}$ c sugar
$\frac{1}{2}$ t salt	1 egg
1 t cinnamon	1 c cooked whole wheat
$\frac{1}{2}$ t soda	1 c seedless raisins
2 T fat melted	

Sift the dry ingredients together, except the sugar, add the fat, sugar, beaten egg, wheat and raisins. Stir until well mixed. Drop by teaspoonfuls on a greased pan about 2 inches apart and bake in a moderate oven until lightly browned.

Scotch Tea Cakes

2 c oatmeal	$\frac{3}{4}$ t salt
1 c sugar	1 t melted butter
2 eggs	$\frac{1}{2}$ t vanilla

Beat eggs, add salt and sugar gradually, add butter and vanilla and oatmeal. Drop from spoon on a well greased pan. Spread into flat cakes and bake in a moderate oven 12 minutes. Let cool in pan before serving.

Prune and Oatmeal Drop Cookies

3 T fat	$\frac{1}{2}$ c milk
1 c sugar	$\frac{1}{4}$ c prune juice
2 eggs	$\frac{1}{4}$ c cooked pitted prunes
1 t B. P.	1 t vanilla
$\frac{3}{4}$ c flour	3 c rolled oats
$\frac{1}{4}$ t salt	

Combine the flour, baking powder, salt and sift together well, then mix

with the oats. Cream the fat and sugar thoroughly. Add the beaten eggs and beat well. Add the dry and liquid ingredients alternately, adding the prunes and vanilla last. Drop 3 inches apart on well greased pans. Bake in a moderate oven 15 to 20 minutes.

Oatmeal Cookies

1 c lard	3 c flour
1½ c sugar	2 c rolled oats
1½ t salt	1 c raisins
2 eggs	3 t B. P.
¼ c molasses (dark)	½ t cinnamon
¼ c hot water	½ t cloves
¼ t soda	½ t nutmeg

Sift flour, baking powder, and spices together well. Then mix with raisins and rolled oats. Cream lard with sugar and salt, add beaten eggs, molasses and hot water. Then add all the dry ingredients. Drop by teaspoonfuls on greased cookie sheet and bake in a moderate oven 350 to 365°F. for 8 to 12 minutes.

XI. USE CEREALS IN MEAT SUBSTITUTE DISHES

Cereal Chowder

(Use cooked whole wheat or rice)

2 c diced carrots	1 pt. milk
1 pt. boiling water	2 c cooked whole wheat or
½ c diced salt pork	cooked brown rice
4 T chopped onion	1 t salt; pepper
1 T flour	1 T chopped parsley

Cook the carrots in the boiling water until tender. Fry the salt pork until crisp, remove it from the fat, and cook the onions in the fat. Stir in the flour and cook a few minutes longer. Mix all ingredients in the upper part of a double boiler, stir until well blended, and cook about 10 minutes. Serve over crisp toast.

Turkish Pilau

(Use cooked whole wheat or rice)

2 thin slices salt pork	½ c chopped celery or 1 t
2 onions, cut fine	celery seed crushed or
3 c tomato juice and pulp	some dried celery leaves
2 c cooked wheat or rice	1½ t salt
¼ c minced parsley, if avail-	Pepper
able	Paprika

Fry the salt pork until crisp, remove from the fat and cook the onion in the fat until lightly browned. Heat the tomatoes, add the wheat, onions, celery and salt, and cook about 15 minutes. Stir frequently. When the mixture has thickened, stir in the crisp pork and parsley and add more salt if needed, and the pepper. Serve on crisp toast.

Scrapple

(Use ground wheat, corn meal or combination of these)

- | | |
|------------------------------------|--|
| 1 lb. ground cooked pork | 2 t salt |
| 3 c cracked wheat | $\frac{1}{4}$ t black pepper |
| 6 c broth in which pork was cooked | $\frac{1}{2}$ t poultry seasoning if desired |

Cook the cracked wheat in the broth in which the pork was cooked for $\frac{1}{2}$ hour. Combine the pork and the wheat, add the seasoning, and mix thoroughly. Place in a bread pan which has previously been rinsed with cold water. When the mixture has set, cut into thin slices and brown in fat in a frying pan. Dip slices in plain flour or meal before browning.

Cheese Pudding

(Use cooked wheat or rice)

- | | |
|------------------------|----------------------------------|
| 1 egg | Salt, pepper, paprika and nutmeg |
| $\frac{3}{4}$ c milk | |
| 2 c cooked whole wheat | 1 c cheese (finely cut) |

Beat egg slightly and add it to the milk and the seasonings. Put a layer of wheat in a greased baking dish, then a layer of cheese, etc. Pour the milk mixture on top. Set the baking dish in a pan of hot water and bake in a slow oven till set.

Chili Con Carne made with Wheat

- | | |
|---------------------|-----------------------|
| 1 lb. hamburger | 2 c cooked wheat |
| 1 large onion | Salt |
| 3 T fat | Pepper |
| 2 c sieved tomatoes | Chili powder to taste |

Brown the onion and meat in the hot fat. Add the tomatoes and seasonings. Simmer until meat is done. Add the cooked wheat. Serve hot with Crackers.

Squaw Hominy

(Use Corn or Wheat Hominy)

- | | |
|---------------------------------------|----------------------|
| 3 slices bacon or salt pork | 5 eggs |
| 2 c cooked hominy | $\frac{1}{2}$ t salt |
| $\frac{1}{4}$ c milk (may be omitted) | |

Cut the meat into $\frac{1}{2}$ inch pieces and fry until brown. Pour off $\frac{1}{2}$ of the grease. Add the hominy to the skillet. Beat the eggs and to them add the milk and salt. Add the egg mixture to the hominy and bacon mixture and scramble over moderate heat until the egg mixture is soft cooked. Serves 4 to 6.

Hominy Custard

(Use Corn or Wheat Hominy, Rice or Macaroni)

- | | |
|------------|----------------------|
| 2 c hominy | 1 t butter |
| 2 eggs | $\frac{1}{2}$ t salt |
| 1 c milk | |

Mix hominy with beaten eggs, milk and seasonings. Pour into buttered baking dish or individual dishes. Set in a pan of hot water and bake till firm—about 40 minutes.

Hominy Loaf

(Use Corn or Wheat Hominy, Rice or Macaroni)

2 c hominy	1 c grated cheese
1 c milk	1 t onion juice
2 eggs	1 t salt
1 c soft bread crumbs	1 T chopped parsley

Scald milk, add bread crumbs, cheese, seasonings, beaten eggs, and hominy. Turn into a baking dish, place in a pan of hot water and bake in a moderate oven. Serve with tomato sauce.

Italian Baked Rice

4 c boiled rice	1½ c tomato juice
¾ c grated cheese	2 t salt
½ c chopped pimento	¼ t pepper

Mix the ingredients well and pour into a baking dish. Cover the top of the dish with the pulp left from straining the tomatoes. Bake for 30 minutes in a moderate oven and serve hot. This dish will make 10 average servings. Parsley and paprika may substitute for pimento in this recipe, or it may be omitted entirely.

Spanish Rice

1 c uncooked rice	1 small onion
3 or 4 slices of bacon or salt pork	1 chopped green pepper
1 qt. can tomatoes sieved	Salt
	Pepper

Cut the meat in small pieces and brown in a deep skillet or sauce pan. Remove the crisp bits of meat and save. Wash the rice, dry it thoroughly and brown it in the fat. Add the tomatoes and seasonings. Simmer slowly till rice is tender and the liquid is mostly absorbed. Add the crisp bits of meat and serve hot.

Baked Eggs and Rice in Tomato Sauce

(Use Rice or Wheat Hominy)

3 c cooked rice	3 T fat
1 large can tomatoes	3 T flour
1 t salt	7 eggs
1 T chopped onion	½ c grated cheese
6 cloves	1 c buttered crumbs
1 bay leaf	

Cook the seasonings in the tomato a few minutes. Strain thru a sieve. Add the blended fat and flour and cook till smooth and thick. Arrange the hot cooked rice in the bottom of a flat greased baking dish. Arrange the eggs carefully on the rice. Pour the hot sauce over the eggs. Sprinkle with grated cheese and crumbs. Bake in a moderate oven till eggs are set. Serve hot.

Baked Cheese Tamale

3 large onions, cut fine	1½ c cornmeal
3 T drippings	Pepper
2 c tomatoes	5 c boiling water
3 t salt	1 c grated cheese

Cook the onions in the drippings for 10 minutes. Add the tomatoes, 1 t. of salt and a little pepper, and cook 10 minutes longer. Sprinkle the corn meal slowly into the boiling water, add the 2 t. of salt, stir constantly and cook for 15 minutes. Into a greased baking dish place alternate layers of the mixtures and sprinkle each layer with the cheese, reserving some of the cheese for the top layer. Bake about 25 minutes in a moderate oven (350°F). Serve from the dish. Serves 5.

Macaroni Italian Style

1 c macaroni	2 T flour
2 T butter	1½ c scalded milk
¼ c finely chopped ham scraps (may be omitted)	¾ c grated cheese
	Salt and paprika

Break macaroni in one-inch pieces and cook in boiling salted water. Drain and reheat in sauce made of butter, flour and milk to which is added cheese. As soon as cheese is melted, season with salt and paprika and turn on serving dish. Sprinkle with ham and garnish with parsley.

Italian Spaghetti

4 T chopped onion	1 T chopped parsley
2 T butter or drippings	2 c sieved tomatoes
¾ lb. liver chopped	3 c raw spaghetti
2 t salt	4 qts boiling water and 4 t salt
Pepper	2 c grated cheese

Brown the onion in the butter. Add the liver and seasonings and cook slowly for 10 min. Add the tomatoes and simmer 20 min. Cook the spaghetti in the boiling water till tender. Drain and rinse. Pile the spaghetti on a deep platter. Pour the tomato mixture over it and sprinkle the cheese on top.

Baked Macaroni or Spaghetti with Cheese

2 c macaroni or spaghetti into small pieces	1 t salt
2 T flour	¾ lb. cheese, shaved thin
4 T butter or other fat	½ c buttered bread crumbs
	2 c milk

Cook the macaroni or spaghetti in 2 qts. of boiling salted water until tender, and drain. Make a sauce with the flour, fat, milk and salt. Take it from the stove, add the cheese, and stir until the cheese is melted. Place the macaroni or spaghetti in a buttered baking dish in alternate layers with the cheese sauce, sprinkle the buttered crumbs over the top, and bake in a moderate oven (350°F.) for about 30 minutes.

Thrift Salad

2 c cold cooked hominy
¼ c diced pickle
1 T grated onion
1 c grated raw carrot

2 diced hard-cooked eggs
(may be omitted)
Salad dressing to moisten

Combine the ingredients in the order given and let stand in a cold place for one hour before serving. Serve on shredded raw cabbage.

Macaroni Salad

Drop the macaroni, broken into short lengths, into boiling salted water and cook until tender—about 20 minutes. Then drain. Run cold water through it, drain, and chill thoroughly. For salad, combine the cold macaroni with small cubes of sharp cheese and with something to add crispness. Chopped celery, sweet pickles or green pepper may be used. Mix with tart, well-seasoned, cooked salad dressing, and serve the salad on crisp shredded cabbage.

For information on the use of white flour in baking see "Home Baking," F. B. 1450.

Additional recipes for the use of corn meal and corn products will be found in "Corn and its Uses as a Food," F. B. 1236.

Additional recipes for the use of whole wheat will be found in the leaflet, "Whole Wheat, a Valuable Addition to the Diet."

These bulletins are obtainable from your County Extension Office or from the Montana Extension Service, Montana State College, Bozeman.