

Boiled rice.

Rice may be cooked in the double boiler by the same method as other cereals, by allowing 1 part of rice to 3 of water. The rice should be well washed in cold water.

It will cook in from three quarters of an hour to an hour. Use milk sometimes in place of half of the water.

The Chinese cook their rice in this way. A very large amount of water is used, — several quarts for one cup of rice, — and when the water is boiling violently the rice is scattered in very slowly. The boiling continues from twenty minutes to half an hour, or until the grains are tender. Then the water is drained off through a colander. The rice in the colander should then be placed where the remaining moisture will steam off. By this method some food value is lost, but the grains of the rice stand out distinctly and are light and dry. The grains should be tested after boiling twenty minutes to see if they are tender.

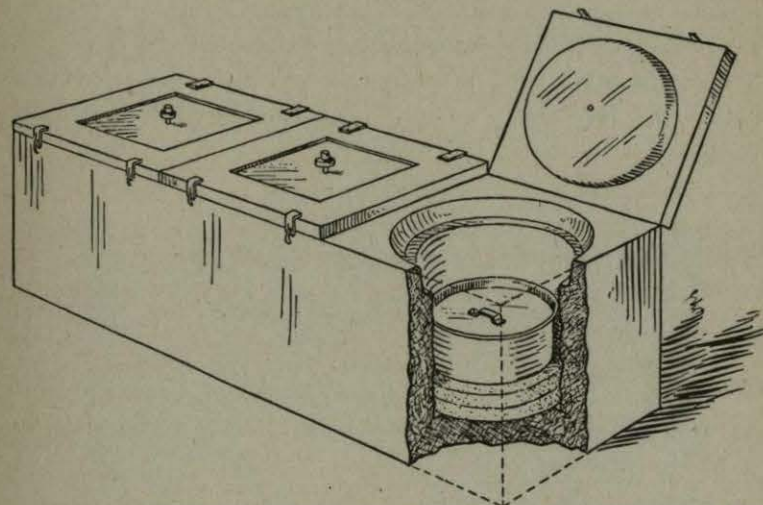
Fruit and rice or other cereal. When the rice is cooked in the double boiler, add a handful of stoned raisins and cook with the rice, or add a few soaked prunes cut in pieces.

One morning Barbara Oakes tried putting raisins with the oatmeal. Once after she had been blue-berrying she put some berries into the breakfast food to surprise the family. Suppose you try some other berry. Look back at the lesson on fruit and see what else might go into the hot cereal.

Eating cereal. We should eat our cereal slowly, instead of bolting it. An easy way to make oneself do this is to eat it with toast or a cracker.

When shall we cook the cereal? On account of the fact that cereal should be cooked a long time, it is best

not to wait until morning to cook it. In winter, when the fire is kept in overnight, the first cooking can be done at supper time, and the boiler left standing on the range or stove, at the back. In summer, the cereal



Courtesy of Ohio State University. From Homemakers' Reading Courses, Vol. I, No. 2.

FIG. 74.—The breakfast cereal may be cooked overnight in a fireless cooker. This cooker is fitted with valves which permit the escape of steam, and prevent water from condensing in the cooker.

can be thoroughly cooked the day before, and reheated at breakfast time. There are still other ways. Have you ever heard of the fireless cooker and the Atkinson cooker? We shall study these in another lesson.

EXERCISES AND PROBLEMS

1. Weigh a cup of flaked cereal and a cup of granular.
2. Make a list of the flaked and granular cereals, that you know about, with the amount of water for each one.

3. Does anything in your study of physiology explain why you should eat the cooked cereal slowly?
4. How much corn meal shall you need to make mush for a family of six? Of eight?
5. Weigh the contents of a box of ready-to-eat cereal. Weigh the same measure of oatmeal; of corn meal; of rice.
6. Which is the least expensive? Can you tell why?
7. Mollie Stark used one of the recipes in this lesson with a foamy sauce for dessert at dinner (Lesson 13). Which one did she select?

LESSON 19

THE VALUE OF EGGS AS A FOOD

WHAT is there for you to learn about selling eggs and about using them at home?

It may be that you help your mother in raising poultry, and sell the eggs; and, of course, you have enough for home use, anyway.

Eggs for market. There are many pamphlets printed about poultry and eggs for profit. You may have read about the Poultry Clubs in some of our states, and perhaps you are a member. Some of these pamphlets are kept on the book shelves at the Pleasant Valley School, and the pupils try at home some of the plans suggested. The important things for poultry are a clean house, clean drinking water, good food, litter to scratch in for the winter, a "run" for good weather and for summer, fresh air, and dry feet. In a tightly shut henhouse we cannot have healthy hens that will lay. They need fresh air, but, as their bodies are about eight degrees

hotter than ours, they do not need to be kept warm. The food that hens require is very much like our own; grain, some meat food, green stuff, plus something to make the eggshells hard. If you want the eggs to



Courtesy of Miss Laura B. Whittemore.

FIG. 75. — Miss Field and her flock of White Wyandottes.

have the flavor that customers call "perfectly delicious," you must be careful to give them no table scraps that have a strong flavor. Miss Field, the young woman in Pleasant Valley who sells eggs, never gives

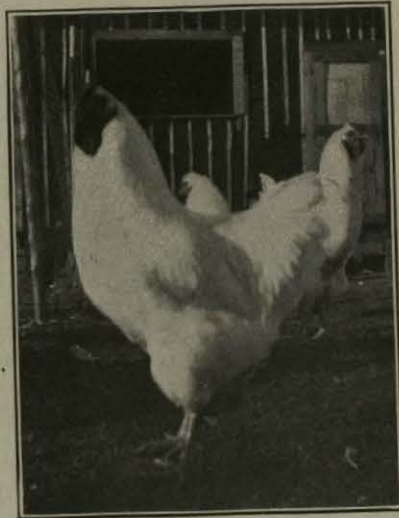
table scraps to her laying hens. She feeds the scraps to the cockerels that will be sold for broilers.

Selling fresh eggs. Miss Field is very careful to send only fresh eggs to market. Her commission mer-



Courtesy of Miss Laura B. Whittemore.

FIG. 76.—Beauty Bright. The openings in the houses are closed by shutters covered with heavy cotton cloth.



Courtesy of Miss Laura B. Whittemore.

FIG. 77.—Jack, one of Miss Field's cockerels, with his well-ventilated house at the back.

chant wrote her that he never tested her eggs because he could depend upon them.

The Woman's Club asked Miss Field to give a talk about her poultry raising because they knew that she was practical, and that she made it pay. She warned them about taking batches of eggs of all ages to the store, and reminded them that when we buy eggs we do not

like to find an old or a cooked egg or a small chicken, at thirty cents or more a dozen. Miss Field said that, if there were eggs that did not hatch in the incubator, she always opened them, and used them at home if they had not spoiled; but that she would never think of selling them. She also said selling direct to the consumer paid her better than selling on commission.

Eggs should be stored in a cool place, and on the way to market should be kept out of the sun. The picture (Fig. 78) shows that the weather is hot, because the family is using an umbrella, but there is none over the eggs!

Another important point is a clean nest for the hen. The shell of the egg is porous; so, if we wash off the dirt, we may hasten the spoiling of the egg. See if you can reason this out.

Here is one odd little point about selling eggs that Miss Field mentioned. In some places white eggs bring a higher price; in some cities, brown. You must find out about your market, and choose the kind of hen to suit. In New York City white eggs always are quoted higher than brown, and cost more at the grocery; although, when you sell direct to a customer, it does not seem to matter.

The cost of eggs. When we raise our own food it is not easy to know just what it costs in money. If we count as the money value of eggs what we can get for them, that will help us to compare them with other food, at least, and to judge whether to eat all or to sell

them, or to eat some and sell some. Of course, they do take the place of ready money sometimes, and so



U.S. Department of Agriculture, Bureau of Animal Industry.
Bulletin 141.

FIG. 78. — Taking eggs to market. Eggs exposed to the sun during an eight-mile drive at a temperature of 106° .

we change them for some other kind of food. The question is, whether we do this wisely, always.

Remember that the food value is as follows:

8 eggs = 1 quart good milk = 1 pound steak, *about*.

If the eggs are 24 cents per dozen, and the steak 24 cents per pound,¹ what food value is lost if you change the eggs for the steak? Do you see what money value is lost, as well? Of course, the change gives you variety. On the other hand, when good eggs bring a high price, it is to your advantage to sell, and use fewer in cake and puddings at home. We must remember that cooked by themselves, and served in place of meat, they are valuable, especially for little children and invalids.

Food value of eggs once more. Remember that as the tiny chicken grows inside the shell, its food is there, with something taken from the shell in the way of mineral matter; and the baby chick comes from its shell, quite well grown, with energy enough to pick for its next meal. Eggs are one of the body-building foods, and for this reason are good for growing children, invalids, and people who are getting well, and who have lost flesh.

Are hard-cooked eggs digestible? Yes, if eaten properly, an egg, hard boiled or fried, is digestible. You need not be afraid to serve fried eggs; but you must remember that the hard egg and the egg with fat will take *longer* to digest. So, if some one at home has a rather feeble digestion, a soft or raw egg is better than the fried; and better for the little children.

¹ Prices of steak per pound in a country village, Connecticut, August, 1915: Shoulder steak, 18 cents; round, short, and sirloin, 24 cents; porterhouse, 32 cents. "Western" beef.

What happens to an egg when it is cooked? If you break an egg into a saucepan of cold water, and heat the water slowly, what changes can you see in the egg? Try it and see. There comes a change in color, first, in the white of the egg, before the water boils at all; and when the water boils, the yolk and white become hard. If you leave the egg long enough in water below the boiling point, both the yolk and white harden, the yolk being "mealy" and the white firm so that it can be cut. *The cooking does not change the food value of the egg.*

What do you gather from this little study of the cooking egg?

If you want an egg to be jelly-like, it must be cooked below the boiling point of water. If you like it firmer, cook it in boiling water, without being afraid that it will be indigestible. This is the latest advice from scientific people.

Beating eggs. How convenient it is that the white of egg is elastic, and that we can stretch it by beating, and can catch the air in it, and use the air for making muffins and cakes "light." The yolk becomes creamy; a bit of yolk in the white will keep the white from being stiff. Can you break an egg and drop the white in a bowl without a speck of the yolk?

There is one other important point about the yolk and the white. Do you know how the yolk hangs in the shell? By a string. Look for the string. Do you know why the hen turns the egg over? If the egg lies

on one side, the yolk drops. If the egg is shaken, the string breaks, and so when we send eggs by mail or express they must be firmly packed.

Some other materials to be used with eggs for breakfast and other meals. We have spoken of dried beef in Lesson 17. If the meat for hash is rather too small in quantity, put the chopped meat with some bread crumbs in the bottom of a baking dish, break enough eggs to cover on top of the meat, and set the dish in the oven. Eggs can be made into dishes with potato, or bread or bread crumbs, with cold meat, fish, and cheese. Look back at the lesson on scalloped dishes, and plan an egg scallop for breakfast or supper, with what you have left in the house from dinner.

Eating raw eggs. A good quick lunch. An egg, swallowed whole, followed by a cracker, is a "quick lunch" that is wholesome; and it is sometimes convenient to be able to take an egg in this way. A sprinkling of salt upon it makes it taste better.

Whipped eggs.

What and how much.

1 egg
1 teaspoonful of sugar
a shake of salt
some flavoring
 $\frac{3}{4}$ cup of milk

How to make. Beat the yolk and white separately. Add to the yolk a teaspoonful of sugar, a shake of salt, some flavoring, and $\frac{3}{4}$ of a cup of milk. Beat the white gently

into this mixture and serve in a glass. The flavoring may be a quarter of a teaspoonful of vanilla, or a tablespoonful of orange juice. This is sometimes served to an invalid who can take milk, and is an agreeable luncheon for any one. If milk does not agree with one, a larger amount of fruit juice may be used with the addition of some water, possibly carbonated. The white alone is given in cases of severe illness, mixed with a small amount of water and fruit juice, if the physician permits the latter. This is sometimes the only food that can be retained by an invalid.

Jellied or coddled eggs.

See that the shells are whole and clean. If the eggs are just taken from the refrigerator, lay them in warm water a few minutes. Make ready a double boiler, with the lower part half full of boiling water. Put the number of eggs that you wish to use into the inner boiler. Cover with water that has just stopped boiling. Put on the boiler cover. Stand the boiler where the water below will no longer boil. The eggs will be done in from six to eight minutes.

See if you can think of another way of doing this same experiment.

Boiled eggs.

Put one egg at a time from a tablespoon into boiling water. Allow the water to boil for three or four minutes, depending upon the preference of those served. Remove the eggs, and serve at once.

The *hard*-boiled egg should remain in the boiling water half an hour.

Poached eggs.

Make ready a frying pan by setting muffin rings in it and filling it about half full of gently simmering water, with a

teaspoonful of salt dissolved in it. Break the eggs one at a time into a saucer, and slip each egg carefully into a muffin ring. See that the pan stands where the water is just below the boiling point, for rapidly bubbling water breaks the eggs. When the white begins to set, pour the hot water gently over the tops of the eggs from a spoon. Cook until the white is firm. Slip a griddlecake turner under the egg, lift it gently, and place it upon a piece of buttered toast which you have ready on a hot plate or platter, and remove the ring.

An easier method, resembling the poached egg, is to break the egg raw into a small buttered cup or "patty," standing the cups in a pan of water just below the boiling point, the pan being on the top of the stove or in the oven. Each egg should have a sprinkling of salt, and may have a bit of butter, and a shake of pepper. Cover the pan. This process is longer than the other, and the eggs must be watched to see when the process is complete.

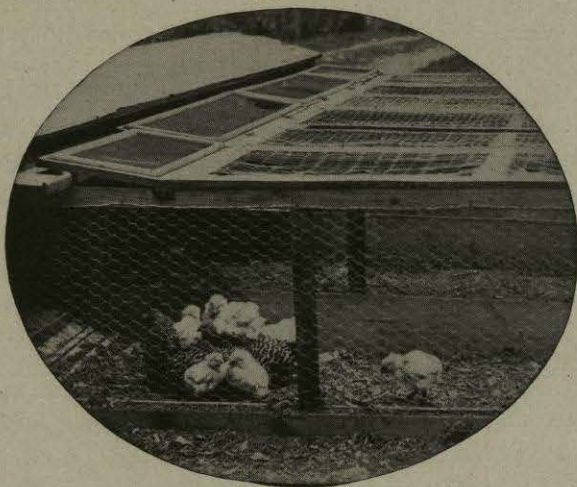
Baked eggs.

This has already been suggested with chopped meat. The eggs can be baked with bread crumbs only, in a buttered baking dish with crumbs underneath and above. Sprinkle on some grated cheese before baking, or lay on thin slices of cheese, and you have a "hearty" breakfast dish.

Preserving eggs for winter use. When the hens are laying well, and eggs are cheap, it is a good plan to store away some for use later. Since the shells are porous, eggs take the taste of sawdust or of anything in which they are placed that has a taste or a smell. For this reason we must coat eggs to keep them.

Even in cold storage, eggs change flavor after a while; and, of course, we never sell preserved eggs as fresh eggs. The easiest way is to pack the eggs down in coarse salt, but *water glass* is the better preservative.

Buy the water glass at the druggist's. With it make a mixture with water, one tenth water glass to nine



Courtesy of Katherine E. Braithwaite.

FIG. 79.—Sallie and her White Wyandotte babies.

tenths water. Use large stone jars. Fill the jars with the eggs, selecting those without cracks; pour the solution over them; cover the jar, and set it away in a cool place. This costs only a fraction of a cent for each egg. The eggs when taken out must be thoroughly washed before cooking. The flavor is good, but it is dishonest to sell them as fresh-laid eggs.

EXERCISES AND PROBLEMS

1. What do you know to be good for your poultry at home?
2. Why is it necessary to coat or cover eggs in order to preserve them?
3. Compare the cost of eggs and meat in your town, and see which is more economical to use.
4. Do you know how to "candle" eggs, and what does the candling show?
5. Can you explain to any one who asks you the difference in digestibility between a raw egg and a hard-boiled egg?

LESSON 20

QUICK BREADS

How can we make and serve quick breads?

"Quick" breads may be mixed and baked the day before, and warmed over for breakfast.

Quick breads take less time in the making than yeast bread. Then, too, we like a change in our bread foods. Mollie Stark's grandmother could remember seeing baking done in the brick oven once a week. A fire was made inside the oven, the ashes were swept out when the fire died down, and the food was cooked when the bricks or stones of the oven had cooled a little. Cake and pies were baked first; then, white bread; and last of all the brown bread, beans, and Indian pudding were put in, to be taken out for Sunday morning breakfast. (Frontispiece.) This baking was an important event and took all day; enough cake, pies, and bread were baked for a week. How convenient, then, between times to

bake johnnycake or hoecake on a board before the open fire, or to make quick biscuit with sour milk and saleratus and to bake them in the bake kettle that stood over the glowing coals with other coals of wood put on top of the iron cover. Mrs. Stark, the grandmother, was delighted when Miss James asked her one day to show the cooking class how to make a johnnycake like that she used to eat in her old home in Rhode Island. There they use white corn meal, as people are likely to do in the South, and the johnnycake is something like the southern hoecake. The class went one afternoon to the pleasant old homestead, where the grandmother was one of the happiest and busiest members of the household. Mrs. Stark explained that the name johnnycake is given to different corn-meal breads in different places, and that she is always careful to explain that hers are:

Old-fashioned Rhode Island johnnycakes.

What. White (or yellow) corn meal, *boiling* water, and salt.

How much. Mrs. Stark says that it is of no use to try to give exact measures, because different kinds of meal take up different quantities of water. There must be enough water to soften the meal so that it will drop from a large spoon, but not run out.

Utensils. A bowl and spoon, and a *griddle*, with a broad knife for turning the cakes.

How to make. Mix the salt with the meal in the bowl. Pour on the boiling water. Mrs. Stark poured it from the teakettle, but said that you could pour it from a saucepan. She stirred the meal with one hand, holding the kettle in the

other, pouring on the water until the meal was all softened but not *very* wet. Perhaps you can find somebody's grandmother to show you how.

The griddle was hot and greased with beef fat.

Mrs. Stark dropped a large spoonful at a time upon the hot griddle, and with a knife made each cake into a smooth oval about $\frac{1}{2}$ inch thick. She let the cakes brown on one side and then on the other. Then she set the griddle on the back of the stove, where the cakes would cook slowly. At the end of about half an hour, each cake had two crisp, brown crusts, easily split apart with a knife, ready to be buttered and eaten. While the cakes were cooking, Mrs. Stark told stories of old days; and, when the cakes were eaten, the girls all declared that they were sweeter and better than popcorn, and that they couldn't be better baked on a board; but Mrs. Stark insisted that they were. She explained that the johnnycake is more digestible than a more quickly cooked griddlecake, on account of the longer cooking.

An exhibit of quick breads. Miss James suggested that the Pleasant Valley School should have an exhibit of their home work, and that muffins and biscuits, among other things, would keep fresh long enough to look well. Here are a few of the rules that they used for their quick breads:

Popovers or puffers.

What and how much.

Flour	1 pint
Milk	1 pint
Eggs ¹	3
Salt	$\frac{1}{2}$ teaspoonful

¹ Some rules give two eggs only.

Utensils. For baking, heavy earthen cups, hot and greased.

How to make. Sift together the salt and flour. Stir together the milk and eggs. Pour these slowly into the flour, stirring and beating as you go.

Special points. The liquid must be poured *very* slowly into the flour to prevent lumping. A large Dover egg beater is convenient for beating out lumps, if any occur.

It is the steam formed in baking that lightens the puffers, and the mixture should be stirred only long enough to make it smooth. The mixture can stand overnight, and still make light puffers in the morning.

Pour the batter in the hot cups, having each cup two thirds full. For baking, the popovers should be put into an intensely hot oven for the first stage of the baking — and then the oven must be cooled. This first stage crusts the top; then the force of the steam pushes up the top; and the muffin “pops” or “puffs” over. The more moderate heat cooks the sides and the bottom, and makes an agreeable crust. The perfect puff-over is hollow. Three quarters of an hour is the average time of baking. If at the end of that time the oven door is set ajar, and the popovers allowed to remain longer, they are improved, coming from the oven stiff and crisp with a rich brown color, rather than soft and underdone. Serve sometimes with a pudding sauce as a dessert, or open and fill with stewed fruit.

Muffins.

What and how much.

Flour	1 pint
Baking powder	3 teaspoonfuls
Salt	$\frac{1}{2}$ teaspoonful
Eggs	2 or 1
Milk	$1\frac{1}{4}$ cup
Butter or butter substitute	1 tablespoonful
Sugar, if desired	1 tablespoonful

Utensils. For baking use greased muffin pan. Bake half an hour.

How to make. Sift together the dry ingredients. Beat the eggs, without separating the yolk and white, and stir the eggs and milk together. Pour the liquid gradually into the flour, first stirring, then beating. Melt the butter or other shortening, and beat it into the batter.

This recipe may be varied in many ways:

(a) Use $\frac{1}{2}$ cup cooked cereal in place of an equal quantity of flour.

Will you change the amount of wet-

ting? (b) One cup fine white corn meal, or $\frac{1}{2}$ cup yellow meal, may be used in place of equal quantities of flour. Corn meal absorbs more water than white flour.

What change in the wetting?

The oven should be the temperature for bread, and the baking at least $\frac{3}{4}$ of an hour.

(c) One cup graham or rye meal may be used in place of an equal quantity of flour.

Baking powder or sour milk and soda biscuit.

What and how much.

Flour	1 pint
Baking powder	3 teaspoonfuls
Salt	$\frac{1}{2}$ teaspoonful
Butter or butter substitute	1 or 2 tablespoonfuls
Milk	1 scant cup



Courtesy of Department of Foods and Cookery, Teachers College, Columbia University.

FIG. 80.—A plate of muffins for breakfast or supper.