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HOUSEKEEPERS' CHAT

Friday, April 5, 1935

(FOR BROADCAST USE ONLY)

Subject: "COOKING FATS." Information from the Bureau of Home Economics, U.S.D.A.

--ooOoo--

Anybody can cook bacon? They don't agree to that in the Bureau of Home Economics, in the U. S. Department of Agriculture. They say there is decidedly a right way: Lay the strips of bacon in a cold or moderately hot frying pan. Cook slowly and turn the bacon frequently. Or lay the bacon strips on a broiler and cook at moderate heat, likewise turning frequently. When nicely browned lift the slices to a piece of absorbent paper to drain off the excess fat. The point where inexperienced cooks often go wrong is at the start. They use too much heat instead of heating gradually and never letting the fat get hot enough to smoke.

Several sad results of breaking this rule: You may spoil the flavor of the bacon--also of the dripping which you could otherwise save and use; you get a smelly smoke all through the house; and, the smoking fat puts on walls and ceilings a greasy coating which will collect dust. This happens no matter what you fry, if the fat gets too hot. And the reason is that when fat begins to smoke it begins to decompose. The products of that decomposition, some of them very disagreeable, get into the air and on the walls.

The chemists tell us fats are composed of fatty acids and glycerol (glycerin to most of us). There are a good many fatty acids, and the differences between the kinds of fat depend mainly on the combinations of fatty acids they contain. Most fats are liquid or solid according to temperature. All fats "smoke" and decompose when heated beyond a certain point. But the melting point and the smoking point vary with the composition of the fat, so the cook's problem is to know what to expect of the particular fat she is using.

Any cook needs to know how fats behave not only in frying but also when she uses them for "shortening" breads and cakes and pastries. Here the problem is not smoking temperature but shortening power. So the fat best for frying may not be the best for shortening.

The common cooking fats include such animal fats as lard and beef suet, which are solid unless heated, and a number of vegetable fats -- those derived from cottonseed, corn, peanut, olive, coconut, or sesame seed. These are sold in different forms, some solid, some liquid. All the forms are practically 100 percent fat. There are also "compounds," which are mixtures of animal fats, or animal and vegetable fats, in solid form. Then there are butter and the margarines.

Lard is "rendered" fat from pork - pork fat with the connective tissue cooked up into "cracklins" and strained out. Beef suet is beef fat which is not "rendered." The connective tissue in beef fat is tender enough to be chopped up, along with the fat, and used in puddings. Of the vegetable oils, one of the most familiar is cottonseed oil which has been "hydrogenated" to make the oil solid at ordinary temperatures. This product is sold in sealed tins under various trade names. You can also buy hydrogenated lard.

Of course, you choose your cooking fat, according to how you want to use it. For deep-fat frying, you need a fat which does not smoke until very hot, such as the vegetable oils, solid or liquid, and high quality lard. But even when you have the right fat for the purpose, you can't tell when it is hot enough just by looking at it. Besides, you have to allow for a difference in frying temperatures for different foods. Cold, wet, raw foods, like potatoes for French frying or potato chips, will cool the fat. Therefore it must at first be hotter than is necessary to cook the potato. Foods already cooked, such as croquettes, do not need to be cooked again, but merely heated through and browned on the outside. For doughnuts and fritters, you need less heat because you must give them more time to cook. But how are you to know when the fat is just hot enough?

If you have a thermometer, that is easy. For doughnuts and fritters, the thermometer in the fat should register around 350 to 365 degrees Fahrenheit. For croquettes, around 365 to 380. For potato chips or French fried, still higher - 380 to 390 degrees.

If you do not have a thermometer, test with a 1-inch cube of bread. When such a cube becomes golden brown in 60 seconds, the fat is right for doughnuts or fritters. When it browns in about 40 seconds, it is just right for croquettes. When it browns in 20 seconds, the fat is hot enough for potato chips.

Of course you'll have trouble if the fat is not hot enough. In that case the food will take up too much fat and become soggy and greasy.

For pan-frying use most any fat, or use meat drippings, especially salt pork and bacon drippings for the flavor they give. If you have plenty of butter you often use that. Or if you cook the Italian way, you fry in olive oil. But the point in pan-frying is to keep the heat down -- not too low, but low enough to be sure the fat does not smoke, as it is the more likely to do because it is spread thin over the frying pan. Butter, margarines, some lard, olive oil, and meat drippings all smoke before they get very hot.

The fats used for shortening are as a rule the solid ones--lard, butter, margarines, "compounds" and the various hydrogenated vegetable oils and hydrogenated lard. You use shortening in breads, cakes and pastries because the mixing of flour and water develops gluten--which makes an elastic dough that gets hard and tough when heated. When you add fat to the flour and mix it thoroughly, you separate the particles of flour with a film of fat and prevent the development of gluten when water is added. The dough then is not elastic but "short" and tender, and your biscuit or pie crust will be flaky, and your cake will have a delicate texture.

Fats take up odors and flavors and they turn rancid quickly if kept in a warm place or exposed to light. A fat that is rancid, like one that is smoking hot, has begun to decompose. So keep your fats cool and in a light-proof can or jar. Meat drippings, especially, need a cool place, because they contain meat juices and spoil if kept near the stove.

You can use fats over and over for deep-fat frying if you take good care of them. That is, strain the fat after each frying, cool it, cover it closely, and put it in the coolest place you have.

Frying, rightly done, gives food a tempting flavor you can get no other way, while for shortening, you could hardly do without it. So know your cooking fats and treat them well.

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