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Electric Cooking Made Cheap...

By Virginia Trullinger

The use of electricity in the kitchen is on the increase. This is especially true in farm kitchens. After laboring for years over a hot coal or wood range, the farm housewife appreciates the convenience, safety and comfort of cooking by electricity. The city housewife, although she has the advantage of gas, is also becoming interested in electric cookery.

The objection usually raised against electric cooking is the cost. And with customary equipment and methods it is expensive, especially when compared with wood, coal and gas cookery. But home equipment experts in the state agricultural experiment stations have followed and proved the theory that the cost of electric cooking depends on the type of utensils used. In other words, when the housewife selects her electric stove she must also select proper, efficient equipment to use with it. The idea is to waste as little electricity as possible.

In order to supply the housewife with some information along this line, Miss V. W. Swartz of the Agricultural Experiment Station at Pullman, Washington, tested 17 utensils of six different materials to determine their relative efficiencies in cooking vegetables in the electric oven. This was done by determining the time and the amount of electricity required to bring 1,000 grams of water to a temperature of 200°F. in each utensil in a standardized electric oven. The materials of which the utensils were made included cast-iron, glass, china, enamelware, stainless steel and aluminum.

Miss Swartz reported from these tests that of the various materials used, the utensils made of cast-iron were the most efficient, requiring 27 minutes to heat the water to the required temperature. The glass, china and enamelware utensils were next in efficiency, requiring from 29 to 31 minutes to heat the water. The aluminum and stainless steel utensils had the lowest efficiencies, requiring from 39 to 55 minutes to heat the water. In other words, it took about twice as long and required practically twice as much electricity to heat a given amount of water to a temperature just under boiling in aluminum and stainless steel utensils as in cast-iron, glass and chinaware utensils.

This would appear to be important information for the housewife, especially in these days of high-pressure salesmen of aluminum and stainless-steel cooking utensils. While the cast-iron and chinaware utensils may not be so pleasing to look at, it would appear that they are more saving of electricity than aluminum utensils for oven cooking, at least.

However, Miss Swartz was not satisfied with these tests with water. She made further tests with vegetables to find out if her first test results were correct. Vegetables were baked in china casseroles and aluminum kettles, and the time and the amount of water required to secure an attractive, palatable product at temperatures ranging from 250 degrees to 500 degrees F. were determined for each utensil. The results with the vegetables confirmed those with water. The time required to cook the vegetables properly in the aluminum utensils was often from 30 to 45 minutes longer than in the chinaware, and the consumption of electricity, of course, correspondingly larger.

In short, it seemed pretty well established that, for cooking in an electric oven, utensils made of cast-iron and chinaware are much more efficient than utensils made of aluminum. Of course, the aluminum is easily cleaned and holds heat for a longer period. Aluminum utensils can be purchased rather cheaply, too. But the fact remains that it is more expensive to cook with aluminum utensils in the oven from the standpoint of heat required and electricity consumed.

Miss Evelyn Roberts of the Washington Agricultural Experiment Station points out that the average housewife, having only a limited amount of money to spend for a cooking utensil for the electric stove, is likely first to decide upon the capacity of the utensil needed. She has little information to guide her as to the best shape and finish of the utensil and only the preliminary information reported above as to the best type of metal or other material. Therefore, experiments were undertaken to remedy this situation.

Results showed that the characteristics of an efficient utensil for top-stove cooking are: A dull-surfaced, flat bottom; highly polished, straight sides; a well-fitting cover; and heavy enough material to insure durability and no warping. Apparently no one metal or material is perfect in all respects; so the selection of material depends largely on the type of electrical heating unit employed.

Experiments with oven utensils showed that the most efficient oven-ware is that which has an outer surface which readily absorbs radiant heat such as rough iron, porcelain, enamel or glass. The least efficient oven-ware is that which has a highly polished surface which reflects radiant heat. Thus shiny ovenware such as aluminum or stainless steel is much less efficient.

Probably the most interesting feature of the proper selection and use of utensils for electric stoves is that in all cases efficiency and economy in these utensils is based upon the common and well-known laws of physics. It probably will be difficult, for example, to convince the average housewife that she should leave the bottoms of her pots and pans scotty and black and should polish the sides. However, if she is interested in keeping the monthly cost bill for electricity down to a minimum she must observe such laws.

Slaves of Fashion
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Choose Utensils to Suit Your Stove

...shaped that they must have given the wearer many hours of silent suffering in the name of Fashion.

Dame Fashion has said, "Ye who would be fashionable, wear these and do this." And we have worn and done, not realizing the sheep-like manner in which we were following her dictates.

Several years ago Fashion decreed, "Thou shalt be thin." And our free, independent young women meekly bowed and went on their way with laborious exercise and painful self-denials to obtain that much-desired thinness. Young and old alike strove to obey the call, and with what results! They lost health and beauty in the attempt.

Bleeding a chicken thoroughly results in a clearer stock and lighter meat.