

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

m 3 1/4
ms.

HOUSEKEEPERS' CHAT

Saturday, February 13, 1937

★ FEB 12 1937 ★

U. S. Department of Agriculture

(FOR BROADCAST USE ONLY)

Subject: "NEWS NOTES FROM WASHINGTON." Information from the Bureau of Home Economics, U. S. Department of Agriculture.

--ooOoo--

Listeners, halt your egg-beaters and restrain your stirring-spoons while I read you today's letter from Washington reporting biscuit and muffin news. Rest your weary arm a moment while our Department of Agriculture correspondent tells you why biscuits are like babies and why the lazy cook may make the best muffins.

Here's the news, exactly as it comes from the pen of our correspondent:

"Whenever I visit the foods laboratories of the Bureau of Home Economics, I am sure to learn something new -- new and surprising usually. Even if I just peek in the door to see what's going on, I am likely to come away with my head buzzing with new ideas.

"Now for example, only yesterday I learned that one of the chief precepts of the child psychologists holds good in the kitchen as well as the nursery. In other words, biscuits and muffins resemble babies in one way, at least. The psychologists say that the way you handle a child in his early life may determine his later character, that different treatment will make different individuals of children -- twins, say -- who started life much alike. And the foods people say that this is also true of quick breads like biscuits and muffins. In fact, they demonstrated it before my very eyes. They showed me 4 baking-powder biscuits that you would never dream were brothers -- 4 very different biscuits but made from the same ingredients and baked in the same oven. One was small and irregular in appearance; another was smooth, rather flat and very crusty; a third was light, flaky, tender and tall; and a fourth was squat, tough and close-grained. What caused the difference? The way the dough was handled.

"As I said, all these biscuits came from the same dough-mixture. The foods people used the standard baking-powder biscuit recipes -- 3 cups of flour..... 4 teaspoons of baking powder..... 1 teaspoon salt..... 6 tablespoons fat..... and 1 cup of milk, or enough to make a soft dough. The biscuits were all baked in the same oven, too -- an oven registering 450 degrees Fahrenheit. But the dough of the first biscuit, the one that was uneven in appearance, had very little handling. The ingredients were simply stirred together and then dropped directly on the baking sheet. It was a 'drop biscuit' instead of a rolled-and-cut-biscuit. The second

2/13/37

had slightly more handling because it was rolled out on the board, cut and baked. It came out flat, even and crusty. As for the third, that got 18 strokes of kneading on the board before rolling out, cutting, and baking. And as a result, it was lighter, taller, flakier, and more tender. The fourth suffered from too much handling, so much kneading that it came out flat, tough, and close-grained.

"The moral seems to be: Guide the amount of handling by the kind of biscuit you want to turn out. The minimum of kneading produces an even, flat, crusty biscuit, and 15 to 18 strokes produces a tall, tender, flaky biscuit.

"So much for the guidance of the young biscuit. Now about the training of muffins. The foods people find that the shape and texture of the muffin depends on the amount of stirring the batter gets. They demonstrated this to me by mixing and baking several muffins using the same ingredients and the same oven yet producing very different results. They used the standard muffin recipe which calls for 2 cups of sifted flour..... 3 teaspoons of baking powder..... 1/2 teaspoon salt..... 2 teaspoons sugar..... 1 egg..... 1 cup milk..... and 4 tablespoons of melted fat. And they baked the muffins in an oven registering 425 degrees. The first one came out with a light texture, an even grain, and a rough rounded top. It had had the least stirring -- only enough to moisten the ingredients. The second came out with a bulging top -- a regular peak, and long tunnels inside. It was the result of stirring the batter until smooth. The third muffin was heavy, soggy, and tough, had tunnels inside and a peaked top, because its batter had had a great deal of beating. So much beating caused it to lose its leavening and caused the gluten in the flour to develop to the point of toughness.

"So the moral of the muffin story seems to be that the more you save on elbow grease, or the less arm-work you do, the better muffin you'll produce. And the moral of the biscuit story seems to be that very little kneading is better than a lot for the future character of the biscuit.

"A couple of other interesting points developed in these stirring studies. One was that folding the biscuit-dough produces a flakier biscuit than kneading it. Another was that a better biscuit results if you knead in as little extra flour from the board as possible. Keep the dough as soft as you can and still handle it. As the dough stands, the gluten in the flour will take up some moisture anyway.

"As for muffins, the tests showed that the easiest method of combining ingredients proved best. Have the eggs, milk and melted fat all at room temperature to start with. Combine these 3 first and then pour this mixture into the sifted dry ingredients all at once. This gives the mixture a rather rough appearance but it produces the most even texture and gives the muffin a rounded instead of a peaked top. By the way, best results seem to come from filling the muffin tins two-thirds full and baking in a hot oven -- 425 degrees Fahrenheit for 20 minutes."

That concludes today's letter reporting biscuit and muffin findings from the Bureau of Home Economics of the United States Department of Agriculture.
