

SUGGESTIONS FOR COOKING AT HIGH ALTITUDES

At sea level water boils at 212° F., at higher altitudes the air is rarer and atmospheric pressure is diminished and water boils at a lower temperature than 212° F. For each rise of about five hundred and thirty feet above sea level the boiling point of water falls one degree. At five thousand feet above sea level, the boiling point of water is about 202° F., and at ten thousand feet, the boiling point is about 193° F. Thus, when potatoes are boiling at ten thousand feet altitude, they are subjected to about the same degree of heat as potatoes cooking on the coast in a double boiler, or a fireless cooker, and, in consequence, a longer time must be allowed to cook them. In a few words, while thirty minutes will suffice to cook a potato on the seacoast, from sixty to ninety minutes would be needed at ten thousand feet. This variation depends on atmospheric pressure, which varies according to the altitude. All other lines of cooking are influenced by this same variation of pressure.

As strong heat is necessary to sear over the outside of meats to be boiled or roasted, that the juices be kept within the meat, and as boiling water at high altitudes sears over but imperfectly, it is best to subject such joints first to hot, dry heat in a frying pan. Turn the meat, as each surface is crusted over, until all the surfaces have been so treated, then transfer to boiling water or the oven to complete the cooking at the usual temperature, 165° to 170° F.

In cake making at high altitudes the external atmosphere pressure being less, the cell walls holding the gases generated by the leavening agents and the creaming of the Crisco and the sugar tend to expand too much, burst and run together and the outer cell walls not yet being sufficiently hardened by heat, also settle and the cake is heavy. The remedy is to maintain equilibrium between external and internal pressure, and this is done by the formation of less air cells: i. e., in practice, by the use of less shortening and sugar or less leavening agent; or, by increasing the tenacity of the dough; in practice, by being sure to use fresh eggs and more of them.

Any of the recipes for cakes, cookies, or shortening mixtures, given in this book can probably be used successfully by simply cutting down the quantity of Crisco one-third and sugar one-fourth.

Sugar and water for frosting and fondant requiring longer cooking than at sea level, the syrup will register from 218° to 220° F., at the soft ball stage.