

**A STUDY OF THE COMPARATIVE COST OF PRODUCTION
OF HOME MADE AND BAKERS' BREAD.**

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At Teachers College, Columbia University, in a course in Experimental Cookery, some work was done in studying the cost of the production of bread and comparing the homemade article with the commercial product. The following statement was the basis for the investigations.

A dealer in a certain town claimed that from one barrel of flour costing five dollars he made three hundred and fifteen loaves of bread, which he sold for five cents each. The problem to be worked out involved the consideration of how much went into the bread besides the flour, how much was expended for labor, and for plant, and how much was left for gain.

Three hundred and fifteen loaves of bread at five cents each would bring a return of fifteen dollars and seventy-five cents. Deducting five dollars for the flour, ten dollars and seventy-five cents is left to pay for the other ingredients, the cost of production, handling, rent, fuel and profit.

A barrel of flour was purchased by the department and several lessons devoted to bread-baking. The following points were noted each time—the exact measure of sifted flour, the weight or measures and costs of all ingredients, the weight of the dough, the weight of the finished loaf and the per cent loss in baking. Records were also made in each case of the time of mixing, the first raising, shaping, second raising and baking, efficiency being developed in manipulation and planning. From the weight of the finished loaf was calculated the cost per pound of the bread. The class averages were recorded as well as the individual results.

In baking, the meter was consulted in order to determine the number of cubic feet of gas necessary for baking. This cost was compared with the cost of baking with different fuels, coal, kerosene, electricity and alcohol being used, and also the fireless cooker. A study of oven temperatures was thus involved. The temperatures at the beginning, the highest, the lowest, and the average were noted.

In order to get at the exact cost of bakers' bread, commercial loaves were purchased at various places. The results showed the least bread obtained for five cents to be ten and seventy-five

hundredths ounces—the most, fourteen and five-tenths ounces, the average being fourteen ounces. For ten cents the least obtained was seventeen ounces(a loaf of fancy bread) and the most thirty-four ounces. The economy of purchasing one ten-cent loaf or two five cent loaves or ten cents' worth of rolls was considered. The above figures show that the lowest price per pound for bakers' bread is five cents and the highest eight cents, the average being six cents.

According to the dealer's figures, his expenses for a baking were as follows:

Flour \$0.90 for $24\frac{1}{2}$ lbs.
 Shortening \$0.08 for $\frac{1}{2}$ lb.
 Salt \$0.02.
 Yeast \$0.12.
 Total for materials \$1.12.

This amount of material should give thirty-eight pounds of bread dough, on the basis of 3.75 pounds of flour to one quart of water.

From this quantity twenty loaves of 1.75 pound each should be made, that being the average weight of a ten cent loaf. The cost of the material is then \$1.12 as against \$2.00, the selling price of twenty ten-cent loaves. This leaves \$0.88 to pay for cost of production and profit. About the same result would be reached if this same dough were made into 40 five-cent loaves of 14 oz. each.

The following figures were obtained from the class work on homemade bread, in the laboratory:

Cost for bbl. of flour.....	\$5.75
Butterine, 7.94 lb. @ \$0.22.....	1.75
Lard, 7.58 lb. @ \$0.20.....	1.52
Sugar, 6.7 lb. @ \$0.06.....	.40
Milk, 30.35 qts. @ \$0.09.....	2.73
Yeast, 243 cakes @ 0.02.....	4.86

Total materials\$17.01

Total number of loaves, 243.

Cost per loaf, \$0.07.

Total weight of dough, 324.8 lb.

Total weight of bread, 299.6 lb.

Cost per pound for bread, \$0.057.

Percentage loss of weight in baking, 7.76%.

On comparing these figures with those of the baker, we find that his bread costs us five and one-half cents per pound as against the five and seventh-tenths cents per pound it costs us to produce it. The cost in the experiment was increased by the large amount of yeast used to hasten the process, but on the other hand, the cost of fuel is not included in these figures. The evidence is then clearly in favor of buying bakers' bread, as far as expense goes. Of course, this is not taking into consideration the aesthetic side of the question.

These figures are of especial interest at this time when the cost of flour is soaring and the bakers are considering raising the price of bread. Much as we regret the increased cost of living, we must be fair in studying like problems before condemning dealers for what at first thought seems exorbitant charge.

A DISCUSSION OF MISS KENWAY'S STUDY OF COSTS IN CONNECTION WITH BAKERS' AND HOME MADE BREAD.

By the Home Economics Editor.

The writer has heard of a high school physiology class which became so unruly in the hands of a young teacher, that the principal, in despair, sent a colleague of some years' experience in science teaching to investigate and diagnose the situation if possible. The young teacher then summed up her difficulties in this sentence: "We have already gone through the textbook once, and have nearly finished it again, and the term isn't half over yet—what *am* I to do?"

One who has at all considered the vast range of problems presented and material at hand for home economics teaching, might well suppose that the despair of the inexperienced home economics teacher would arise from a situation quite the reverse of that described above. Yet it seems that this is not always the case. "It's no use to give a bread lesson, for they've already had that in the grades," remarked one high school teacher. The above description of the way in which a college class went at a cost problem in connection with bread-making, may prove suggestive to high school teachers who are planning less elaborate studies of similar topics.

As Miss Kenway remarks, it must be remembered, in interpreting results quoted, that the cost of the laboratory loaf is unduly high, owing to the large amount of yeast needed to shorten the process of bread-raising so that the lessons may be completed