

## APPENDIX No. 1

whether there should not be legislation against the alteration of the natural colour of foods. If that were done, then in winter we should have white butter and cheese, and yellowish bread, as nature intended them to be. But the public wants yellow butter, and pale flour, not quite white, but very pale.

Q. My own opinion is that the colouring of butter is a very good thing in many instances, and it is harmless. The butter looks nicer.

A. That is the claim made for bleached flour, that it looks nicer. In one case it is less yellow, and in the other more yellow than the public demand. I see no difference in principle between the artificial bleaching of flour and the artificial colouring of butter.

Q. Have you any evidence to show that flour made from the bleaching process sells for more than flour not bleached?

A. I think it does, though I have no figures available to show. Of course the question of colour is purely a matter of taste. Sometimes when the flour is the very finest cream colour that can be obtained, to bleach it makes it a rather dead white which makes it less attractive to some people. On the other hand, when flour has a heavy yellow colour the bleaching reduces this to a creamy tint which would certainly be preferred by most people. But it is a matter of taste after all, and can be best settled by those who handle the flour commercially.

## NATURAL AND ARTIFICIAL BLEACHING.

Flour when stored undergoes a natural bleaching. The effect of artificial bleaching is not identical with that of natural bleaching. Very old samples of flour can be still further bleached by the artificial method. Two samples of flour two years old were bleached in my presence by the Canadian representative of the Alsop Company. These old samples were given the same treatment as new flours are subjected to. The result was that they were still further bleached, the bleaching removing from them almost the last traces of cream colour and making them different and less desirable I think in appearance. New flours were also bleached on the same occasion, and some of these were certainly improved in appearance from a commercial point of view.

I found that flour made from wheat which had been stored for two years produced bread of almost exactly the same depth of colour as artificially bleached flour from new wheat. But it was not the same kind of colour in the two cases. There was a distinct difference. The naturally bleached flour was more creamy, and the artificially bleached flour was a little more reddish. The difference was very slight but still distinct. It is clear therefore that bleaching does not produce exactly the same colour change as the natural ageing.

## MOISTURE CONTENT OF BLEACHED FLOUR.

In regard to the moisture content of bleached flour, further investigation is needed. Prof. Snyder claims that the bleaching is beneficial to the consumer as the flour is weighed at the mill after it has been bleached and a certain amount of moisture removed by the bleaching. He neglects, however, to give any account of the determinations on which these statements were based. The question is therefore still open. The problem has been taken up by Mr. Frank T. Shutt, the Chemist of the Experimental Farms, who is working on the chemical aspects of bleached flour. Mr. Shutt found that all the samples of bleached flour contained less water than the corresponding unbleached samples after they had all been stored under similar conditions for a month after being bleached. It is difficult to say exactly when this moisture was lost. It does not follow that it was lost during the bleaching process; but at all events the bleaching so altered the flour that after being stored for a month it contained less water than the unbleached. This was true in every instance (six pairs of samples). If therefore two similar flours, one bleached and the other not, have been