

SAFEGUARDING THE FOOD AND WATER SUPPLY —A FUNCTION OF THE STATE

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Some protection of our food and water supply from accidental impurities or those that have been purposely added has been regarded as of importance since the earliest times. The workmen excavating on the site of the ancient city of Samaria found the labels still intact on some of the jars of wines and oils with statements as to where the wine was produced. We are not much in advance of that time in requiring that the label on the food package shall bear a true statement as to its contents.

In England as far back as the time of King John (1203), laws were passed regulating the sale of bread, and in the following reign the "pillory and tumbrel act," as it was designated, was passed for the express purpose of protecting the public from the dishonest dealings of bakers, vintners, brewers, butchers, and other food purveyors. It was in force for more than four hundred years and very severe penalties were decreed for any violation of the statutes. "The punishment was made to fit the crime," as when the seller of impure butter was made to sit in the pillory and have the butter crushed over his head, and there he was required to remain until it had been melted by the sun.

In Germany, in 1435, a certain taverner and his wife were exposed on the pillory in a cask from which they had sold adulterated wine. This appeal to shame and disgrace has been replaced in the twentieth century by a fine and confiscation of the goods. Does it indicate a change in the incentives of the people?

Doctor A. H. Hassall, more than any other Englishman, should have the credit of arousing the people in 1850 to the appalling state of the food supply by his examinations, especially of coffee, cocoa, cayenne pepper, bread and confectionery on the market. The result of his investigations, published in *The Lancet*, led to the "Adulteration of Food and Drink Act," which was passed in 1860.

In this country Massachusetts was the most progressive state, and in 1883 enacted a pure food law. Other states followed this lead and the era of pure foods and drugs was at last fully inaugurated by the passage of the Federal statute in 1906.

The protection of public water supplies and the control of such supplies by national or state authorities, has also an interesting history. It was not, however, until recently that different states of the Union began to supervise the whole subject systematically and to favor legislation putting the authority to control the water supplies and the sewage disposal in the hands of Boards or Commissions composed of scientific and medical experts.

The question of the improvement of food and water supply may be considered under two heads:

- (1) The necessity for improvement.
- (2) What has actually been accomplished within the last decade.

It is evident from the history of the movement that the most logical and practical way of securing an improvement in the food supply is by the action of Federal, state, or municipal authorities. Something may be accomplished, but the public will not get along very far in the correction of abuses, by the education of the manufacturers and dealers in food products, as they have few inducements to reform.

If it is assumed that the food, as originally produced, is of good quality, how does it deteriorate or become unsatisfactory for use? This condition may be brought about by the carelessness or neglect of those who handle the food or by conditions of temperature or storage, so that the food is "rotten, decayed, or putrid," and thus a menace to health. All animal products, but especially fish, are exposed to this kind of deterioration. Fruits must also be carefully watched. It is true that cold storage has done much for the consumer by "carrying" food for one season to another, but it must not be forgotten that cold storage products "go down," as the saying is, very quickly when kept at ordinary temperatures. Much of the so-called ptomaine poisoning is no doubt from this source.

There has been a temptation to sell food under a misleading label. Apples grown in Missouri are marked as if grown in New York. Sardines in olive oil are really sprats in cottonseed oil, etc.

Again foods are "made up" to sell just as the actress "makes up" for her part on the stage and by the use of similar dyes, cosmetics, and beautifiers. The officials condemn this procedure on the ground that the food is "mixed, colored, powdered, coated, stained, or otherwise treated in a manner whereby damage or inferiority is concealed or whereby it is made to appear better than it really is." Thus, "orangeade" is made by the use of well water of doubtful origin, tartaric acid, and coal tar orange dye, on which liquid calmly float day after day the same identical slices of orange pulp.

It is probably heresy to say it in a great wheat-producing state, but there is really no excuse for bleaching good, wholesome wheat flour. Is it not painting the rose? Simply because there is a supposed demand for white flour, why treat the product of nature with chemicals to satisfy such a depraved taste? Maraschino cherries are first bleached by chemicals, then dyed some particular shade to suit the "color scheme" of the hostess. Oranges and grape fruit are picked while really green, rushed to market in cars so arranged that the fruit will be "sweated" in transit, and so appear to be ripe when they reach the breakfast table. The fine flavor of the fruit has never been developed, hence they are dry and tasteless.

The sale of light-weight packages has been largely corrected by the law which requires the weight to be stated on the package. The itinerant vender may, however, still peddle from house to house and sell you his produce in a badly dented tin measure or perhaps thirty-six pounds of apples in a so-called bushel basket, for the forty-eight pounds required by law. These are a few of the reasons why the state must supervise the sale of food products.

The author has had occasion recently to revise a book written about ten years ago, and was surprised to see how many statements made at that time in regard to the adulteration of foods were no longer necessary or even true. That is what food legislation has accomplished.

The spices on the market are almost always pure. Even ground coffee, if mixed with cereals or chicory, has a statement to that effect on the label. Corn flour is not substituted for wheat nor for buckwheat flour. There is little sale of preservatives for food. Oysters are shipped in sealed containers, iced on the outside, so that we get solid and not floated oysters. Extracts correspond in composition to the label. Condensed milk is not sold as condensed cream. Foods that are artificially colored or flavored with synthetic products are so labeled. What has a decade not wrought!

With reference to the water supply, Federal and state authorities have taken over the supervision of the water furnished to cities and towns, and the people have been protected—

(1) From contractors or engineers who would install water works in localities where the supply was unsatisfactory in quantity or quality, or at unwarranted expense.

(2) By having the water supply regularly tested by competent chemists and bacteriologists, instead of depending on the dangerous and ever-changing water from their own private wells.

(3) By having the water sold by private companies carefully analyzed to guard the consumers against contamination.

(4) By having the water furnished on railway trains tested for its purity.

(5) By a scientific investigation of the sewage problem for each locality and by advice as to the best practical method for getting rid of sewage and garbage.

And what, you ask, is the next step forward? Continue by practice and precept to educate the people; for public opinion will go far towards correcting the abuses that still exist in these matters. The co-operation and help of the people are always the chief factors in the success of such a movement. Laws against impure food and bad water are at best but the crystallized sentiment of the people against unwholesome and fraudulent products.

For the proper enforcement of these laws, a live Board of Health or Commission, absolutely unhampered by politics, or

by the numerous changes that political methods always bring about, is positively essential. In those States where such conditions exist, and where scientific and medical experts have been allowed to work out these problems conscientiously, there has been the greatest measure of success and genuine progress.
