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AN OFFICIAL LOOKS AT SANITATION¹

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Editorial Note: In the December 1959 issue of the *Journal* there appeared an article entitled, "What is Wrong with Official Regulation of Food Sanitation," by J. Lloyd Barron, Director of Sanitation, National Biscuit Co., and Past President of the National Association of Bakery Sanitarians. There are two sides to every question. In the article below Mr. A. E. Abrahamson, Chief, Wholesale Division, New York City Health Department, discusses the subject of food sanitation regulation from another point of view.

This topic ordinarily calls for an evaluation of current practices. I am taking the liberty of a broader inquiry. I believe that the official who looks at sanitation should do so not with the view of law enforcement alone. Experience has long ago established that policing a food industry solely on the basis of "do it because you must" yielded unending results in too many instances. Recognizing this the laws regulating the sanitation of food processing establishments and other phases of food control permitted administrators of these laws the use of an educational

approach. This is revealed for instance, in Section 306 of the Federal Food, Drug and Cosmetic Act which reads, "nothing in this Act shall be construed as requiring the Secretary to report for prosecution, or for the institution of libel or injunction proceedings, minor violations of this Act whenever he believes that the public interest will be adequately served by a suitable written notice or warning." The new Health Code of the City of New York takes a similar view. It provides under Section 3.13 "in lieu of enforcement of this Code by way of prosecution, recovery of civil penalties, revocation of permits, seizures and embargoes and condemnations, and other compulsory means, the Department may seek to obtain the voluntary compliance with this Code by way of notice, warning or other educational means, - - -"

I am reminded of a telephone call received by an administrator of a food control agency who was asked, "for Pete's sake when is the inspector going to revisit my establishment." This seemed an odd request. Further inquiry disclosed that the restaurant

¹Presented at the annual meeting of the Institute of Sanitation Management, New York City, September 24, 1959.

owned by the caller was inspected three weeks earlier and the work ordered by the inspector was completed. The caller said that the restaurant was in an ultra clean condition and was ready for the inspector. The restaurant owner was advised that a re-check would be made eventually, in the very near future. Where-upon the caller asked indignantly, "how long do you expect me to keep this place in this shape?"

SENSE OF RESPONSIBILITY

Here is represented an attitude born of misunderstanding. It also shows a lack of a sense of responsibility which reduces the effect of prosecution and fining to a cost of doing business, a tax in a sense.

Unless this attitude is altered, long term results can hardly be expected.

That the official has the responsibility of law enforcement there is no doubt. But he has also to try to achieve lasting results. Frequently to do this he must play the role of educator and counselor.

The official who looks at sanitation of food establishments realizes that his system of infrequent visits cannot in and of itself attain his public protection objectives which are, among others, clean processing plants, clean practices and wholesome ingredients. Many officials feel that there are ways to develop the philosophy, the methods and the means of sanitation. These officials feel that supervision of sanitation is a function of management independent of production and that sanitation must be recognized as an important step in every phase of the technology of food. To get the food industry to realize this as one of its responsibilities is an educational process which officials have undertaken.

Sanitation or the lack of it is not revealed by inspection alone. Process observations, chemical, microscopic and bacteriological examinations are the other tools of the trade. The conditions which characterize poor sanitation are those physical and maintenance defects in plant and equipment which may contribute to the contamination of food in manufacture, storage or service, the defects in the processing and handling of food and its ingredients and its keeping between processes and before service and use.

The official in appraising sanitation must consider, (a) the aesthetic aspects, (b) danger of accidental contamination by chemicals, and (c) presence of bacterial agents from various sources and contacts.

Aesthetic considerations generally relate to the environmental factors surrounding food processing. This was regarded as a public health problem more than 75 years ago. Since then there has been a great movement in this country which was aimed at the control of disease through the improvement of the

environment. Programs were pushed for water sanitation, proper sewage and waste disposal, fly and mosquito control, good drainage, ventilation and lighting in food factories and good factory building construction. These programs still are important.

If we may assume that these programs were properly carried out, they have set the stage for the great new era of factory made foods.

Early in this period of the emancipation of the home maker, about twenty years ago the Federal Food, Drug and Cosmetic Act of 1938 was enacted. The importance of environmental conditions in food plants took on a "new look." Under this law, food is adulterated if it is produced under unsanitary conditions whereby it may become contaminated. To be sure that a crime is not charged on flimsy evidence most agencies determine if filth in food is present which may be attributed to the condition of the physical plant. The laboratory measures which now are used frequently reveal yesterday's housekeeping neglect.

CONSTRUCTION AND REPLACEMENT

Not only may the conditions of the physical plant be transferred to the food item, but the neglect in sanitation maintenance of food equipment may bear even more directly on contamination. Realizing this, a broad new program of food equipment design, construction and replacement has become the order of the day. The danger that foreign material may be found in the food product and the high cost of equipment cleaning have accelerated an interest in the design and construction to facilitate cleaning of food equipment and machinery of all kinds. Frequently modern machines not only improve the product through better technology, but result in cleaner operations with lower costs of both production and cleaning.

The official looks at this as a constructive program and assists in every way possible in the development of equipment standards codes which now are being undertaken by the country's bakers, canners, vending machine owners, restaurateurs and others.

A PROGRAM OF SELF INSPECTION

In 1942 the Sanitary Code of the City of New York was amended to require that food plant processors carry out a program of self-inspection. This was introduced at the time as an educational device. The idea took hold as evidenced by the fact that many plants employ full time personnel to make sanitation evaluations of the plant and its practices. Others contract outside services for the same purpose. The official looks at these efforts as an adjunct to his own program which he recognizes as one which does not

afford sufficient coverage to assure continuous satisfactory operation. Secretary Flemming of the U. S. Department of Health, Education and Welfare, in support of his current budget request in which he sought funds to increase the frequency of Federal inspection of food plants from once every 4½ years to once in 4 years, illustrates the difficulty of assuring adequate coverage by an official program. The official sanitarian, in order to be assured that the assistance of the professional and employed sanitarians continue at a high level, must periodically check the reports which the latter issue as a result of their efforts.

A recent study was made of the sanitary conditions in over one hundred plants under plant employed and professional inspection programs. The frequency of official inspection of these plants was reduced to a minimum consistent with good administrative practice so that there would be little influence exerted by the regulatory agency on the sanitation of the plant. It was found that where a conscientious effort was made to carry out a self-inspection program by company employes a relatively high level of sanitation was maintained.

It was also disclosed that better reporting is done by professional sanitarians although application of such reports is less evident, possibly indicating that self-inspection is effective if management wants it to be.

In the revision of the Health Code of the City of New York which became effective October 1, 1959, the requirement for self-inspection was extended to non-processors but otherwise was retained without substantive change. A new concept also was added as follows:

"Every food establishment shall post or maintain in a readily accessible place, on a form acceptable to the Department, a schedule for maintaining the sanitation of its premises, including control and elimination of rodents and insects and other pests and the cleansing of its equipment. The schedule shall show the job title of persons assigned to the cleaning operations, and the times when such operations are to be performed, as well as the name of the person who supervises the sanitation of the establishment pursuant to the requirements of Section 81.37." (Cleaning-Method provision).

FOOD ADDITIVES MUST BE CONSIDERED

Thus the tools for better sanitation programs are rapidly becoming available. These and classes of formal instruction which are given to food plant personnel are some of the educational efforts of the official concerned with sanitation. There is increasing evidence of a vastly improved condition in the sani-

tary quality of foods as a result of the attack on the aesthetic aspect of food sanitation by law enforcement and by the various educational programs which have been outlined.

The broad official interpretation of sanitation includes safety. Therefore, not unrelated to sanitation is the problem of the presence of chemical materials in food plants. Some of these chemicals are needed to control rodent and insect life. Others may be added to perform a specific function in the process of food preparation. Where there is danger that a hazardous chemical may be incorporated into food by accident or by bad plant practice the official must take swift and positive action. He must see to it that hazardous substances are stored safely, and are labeled properly and legibly. The official looks at chemicals which are proposed for use as food additives, or at a chemically treated surface in contact with food, or at a resin or plastic material used as a coating of a food machine or tank in a new light. The Food Additive Amendment to the Federal Food, Drug and Cosmetic Act regulates the use of such chemical materials which are added to food or which by contact may migrate into food. Such chemicals must be proven both safe and necessary to be permitted, and must not exceed the amount tolerated. Food containing an additive which is not permitted or is in an amount exceeding the established tolerance is violative of the Act.

Thus, sanitary inspections now must include an examination of the chemical materials used for sanitation, recognition of the dangers attendant upon their storage in the food plant and an understanding of the safety of and need for chemicals used as food additives.

Sanitation has yet another and very important aspect: Slocum, of the U. S. Food and Drug Administration believes, "a sanitary food strictly speaking, is one free from injurious substances, particularly infectious micro-organisms. But, modern concepts of food control have expanded this definition to include freedom from materials that are repulsive or obnoxious regardless of their importance as an agent of disease."

EATING HABITS CHANGED

The eating habits of the population of the U. S. have changed radically during the period since World War II. With the family eating out once a week, with the increase of female workers (now estimated to exceed 20 million, many of whom eat at least one meal a day in restaurants), and with the vast amount of travelling for business, and vacation, food preparation has become a major business. The busy homemaker who is frequently also one of the

millions of workers, patronizes the manufacturer of convenience foods. There are thousands of these manufacturers ranging from the local delicatessen or restaurant to nationally famous producers, who cater to this business with numerous varieties of "heat and eat" foods. These include meat, poultry, fish and egg salads; meat, poultry and fish pot pies and frozen dinners; breaded and fried meat, poultry and fish and Chinese style foods. While there are no reliable estimates of the amount of these foods produced, a cursory survey of the display cases of many restaurants and self-service stores, gives some indication of the scope of the development of this business. The general acceptance of these products is based most likely on convenience to the homemaker. Good quality and safety are assumed. Studies have been made to ascertain both the sanitary quality and the safety of ready to eat food.

Some of these so-called convenience foods by these recent studies involving laboratory examination, have shown such bacterial populations as to warrant the concern of some official sanitarians. The official in this field of activity has a sanitation problem not unlike that which he had to control in the days of milk-borne and shellfish-borne disease outbreaks.

Industry is ready to use morbidity and mortality statistics to prove by the relatively few reported cases of illness that these food items are sanitary and safe. The reporting of cases of food illness in the U. S. is known to be incomplete and is not a valid basis for judging the sanitary quality of these foods.

It was reported to the Annual Conference of the Association of Food and Drug Officials of the United States in 1957:

"The human handling which frequently occurs in the manufacture of many frozen foods, such as deviled crab, lobster-a-la Newburg, chicken-a-la-king, stuffed poultry, poultry and meat pies, frozen dinners and others, places these foods in an especially critical category. If the idea is sound that the possibility of contamination varies inversely with the distance from the contaminating source, then foods which are of necessity handled, such as the many frozen pre-cooked foods, must receive our immediate attention and must be controlled at least to the degree that other foods are controlled, such as milk, ice cream, oysters and clams, fresh crab meat and others for which microbiological standards obtain."

SANITATION OF HEAT-AND-SERVE ITEMS NEEDS ATTENTION

Many workers in the field of food sanitation and food technology have recognized the need of a high order of sanitation in the preparation of ready-to-eat foods. The Department of Health of the City of

New York, following studies of the bacterial populations of the foods which have been mentioned, has undertaken the laboratory work needed, not only to ascertain their sanitary quality but also to aid producers with these problems, by the assignment of sanitarians trained in this field of process analysis and consultation.

Pre-cooked chilled and frozen foods do not require thorough heating in preparing them for service. As a consequence of this, these products must be safe at the outset. This safety must be achieved as a joint effort of management at the planning and supervisory level, and plant employes at the practical level. No new techniques are needed to produce foods on a commercial scale which are low in bacterial counts. The general principles which obtain relate to strict compliance with good practices in personal hygiene, plant and equipment sanitation, terminal heat treatment and time-temperature control. Defects in personal hygiene are frequently revealed by bacterial counts and can often be traced to the responsible individual by phage typing techniques. Manual contact with food must be held to a minimum. Where hand processing is necessary, regulated and supervised hand sanitation procedures are most important. This is difficult to control, but when properly carried out, it results in most gratifying bacteriological counts.

The investigation of some recent food borne cases has established that objects in the food establishment carried the suspected bacterial agent. Swabbings of these objects have yielded results as high as 6 million total count in a meat grinder, 230 million in a food chopper and 2,300 and 425,000 coliform bacteria, respectively, in these devices. The equipment following dismantling and cleaning with a suitable detergent, a hot water rinse and chlorine solution sanitizer resulted in essentially negative counts.

The official looks at his work in promoting the sanitation of food processing plants, which includes all of these measures and more, as a service to the public, both consumer and processor. The other services not mentioned are, for example, the matter of assuring a safe environment for the worker, the elimination of causes of nuisances, such as excessive noise, smoke, dust and noxious fumes, the prevention of the contamination of water supplies and the control of waste disposal. The official must be sure that the food plant operator is a good neighbor who tries to conduct his business without creating health problems in the community.

The official sanitarian recognizes his responsibilities and carries out his job without fuss or fanfare. His problems arise when someone else fails to carry out theirs.