

trolling the quality of fluid milk. General acceptance of the ordinance provisions by the milk industry has converted a once hazardous food into one of the safest products available to the public.

Recently a memorandum of understanding was signed by the Secretaries of Agriculture and Health, Education, and Welfare to improve sanitation of milk for manufacturing purposes by recommending that the States conduct farm inspections and other control measures. This action resulted indirectly from outbreaks of food poisoning attributed to nonfat dry milk and cheese.

As centralized processing and interstate distribution of foods grew, increased control activities became necessary on the part of Federal agencies, particularly the Food and Drug Administration and the Department of Agriculture. Also, expansion of the Military Establishment has made the Department of Defense the largest purchaser of processed foods in the United States. For esthetic, economic, or other reasons not necessarily directly related to health, Federal requirements applicable to food may sometimes exceed and in other instances be less stringent than those of the States. Nevertheless, local ordinances and State laws are the primary determinants of food quality in restaurants and retail markets, and the Public Health Service continues, within the limits of resources allocated for food protection, to help the States and food industries update their programs for prevention of food-borne disease.

During the past 15 years, food scientists and public health workers have been concerned about the decline of public support for food protection activities needed to cope with the changing practices of production, processing, packaging, distribution, and serving in the food industries. In 1964, the Food Protection Committee of the National Academy of Sciences-National Research Council issued a report (Publication 1195) entitled "An Evaluation of Public Health Hazards From Microbiological Contamination of Foods." About a dozen previous reports by well-qualified groups are cited in support of the recommendation "that immediate action be taken to develop a national program in which the efforts of industry and government can be coordinated for protection of consumers and food industries against the adverse effects of microbial food contaminants." The scientific basis for this appeal to modernize food protection programs and practices is presented in much greater depth than can be discussed in the remainder of this brief statement. Nevertheless, an effort will be made to highlight some of the problems and control measures needed to minimize health hazards from microbiological contamination of foods.

Occurrence of Food-Borne Disease

In the United States today, food safety is taken for granted by most consumers, because they have been educated through advertising, news releases, and official publications to expect the wholesomeness of commercial products to be above reproach. While their confidence is, in large part, borne out by personal experience in purchasing foods for home use, and eating meals prepared commercially, the National Health Surveys indicate that 5 million to 10 million cases of acute intestinal illnesses occur annually in the United States. The affected individuals usually recover in a few days, often without seeing a physician, and the attacks go almost unnoted in official records. However, the National Communicable Disease Center listed only 17 outbreaks and 20,080 cases of milk, food, and water-borne disease in the weekly morbidity and mortality reports for 1965. In 1966, the reports included 176 outbreaks and 8,220 cases. The consensus among food scientists is that the detection and investigation of food-borne diseases is so inadequate at the local level that accurate reporting on a State and national basis is impossible. We do not, therefore, have a realistic picture of the extent to which foods are disseminating disease among the population. This view is supported by the fact that a third or more of the reported outbreaks typically come from one State (California), while 15 to 20 other States may make no report of food-borne diseases to the Public Health Service during the same year.

Compared with the widespread prevalence of food-borne infant diarrhea, tuberculosis, typhoid fever, botulism, brucellosis, poliomyelitis, and other severely debilitating diseases during the first two decades of this century, the situation has been vastly improved. The credit for this change belongs, in part, to the health-oriented professional workers in academic and governmental circles who demonstrated the importance of foods and drinking water as vehicles for disease transmission and then developed the principles of sanitation on which control depends. The U.S. food industries also deserve a large share of the credit for developing the equipment, manufacturing techniques, sanitary practices, and quality control procedures that make possible mass production of enough food