products, many of our present day problems would have been solved before they made their appearance.

The effects of Federal Order No. 8 were also felt through problems dealing with proper labeling. It is only natural for an industry to maintain the normal volume of business, whether through the sale of ice cream or a combination of frozen products. Since the normal volume could not be maintained by following the Order, it was maintained by combining or mixing ice cream with ice milk or sherbet. This was accomplished by placing the two products in the one container, giving the product a marble or variegated appearance, and by encouraging the consumption of water ices and sherbets as such. These water ices are composed of sugar, water, flavor and stabilizer, and are designed to replace the use of ice cream or ice milk in milk shakes and similar drinks. Water ices not being controlled under our laws, are being sold under various trade names. When used in milk shakes, however, a consumer's problem is presented. It is natural for the consumer to believe when a milk shake is ordered that it contains ice cream or ice milk. Therefore, when a water ice is used it becomes a substitute for ice cream, and the customer must be properly informed that a substitute was used in the preparation of his milk shake. This is being done by the display of a sign indicating that water ice is being used in the preparation of milk shakes. The sale of such products must be controlled, and this is particularly true of water ices containing ingredients possessing fats or oils and which can be so made as to resemble a sherbet or ice milk in appearance, to prevent its sale and use in a false, misleading or deceptive manner.

When peace is again restored in this fast-moving world of ours we can sit back and profit by the results of problems and mistakes confronting us at this time. It is my belief that we shall see many changes made in our laws, not only those dealing with frozen dairy products, but other products as well. We, as regulatory officials, feel that present day conditions have presented many problems, but I do not believe they are as great as the many problems confronting our industry as a whole. The day is not far distant when members of the industry, as the result of problems confronting them, will sit down with regulatory officials throughout the country to formulate a legislative program in the various states, which will be of greater value and benefit to themselves as manufacturers, to regulatory officials and to the consumer.

ICE CREAM SANITATION PROBLEMS IN FLORIDA

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It has been necessary for the Florida inspectors to intensify their supervision of the methods practiced in the ice cream manufacturing plants in this State and at the same time overlook unavoidable infractions of the Law and Regulations. The difficulties being experienced by the members of the industry during this wartime emergency are reflected in the work of the inspector.

Perhaps the greatest problem in ice cream plants today is the poor quality of labor. Wages paid in the dairy industry were always low, and at the time they were "frozen" by Government order they were out of line as compared to the wages paid in other industries, particularly defense industries. Many former ice cream plant employees have been attracted by high wages in munitions factories and shipyards; others have enlisted or been drafted into the armed forces. The results have been a high turn-over of
labor and a continual breaking in of new unskilled labor. These new employees have to be taught by the plant officials and by the inspector how to do their work and then continually watched to see that they follow instructions. Unless watched they will fail to dismantle pipe lines, freezers, and other ice cream manufacturing machinery to wash and sterilize them properly. Their previous jobs have not taught them that sanitation is vital in the handling of all dairy products.

Several plants in Florida have been using high school students through the summer vacation, and these workers have in most cases been fairly successful, particularly when the employer kept in mind the fact that children and did not expect them to think and act like mature people. But at best this source of labor is only temporary, as the children will soon be back in school, and other workers will have to be trained to replace them.

Unskilled labor has caused a great deal of trouble to those in charge of the plants and to the inspector due to wasteful practices and bad methods. One case was found recently where careless labor had used moldy butter in making 200 gallons of ice cream mix; as a result, the mix had to be destroyed, as it was unfit for food. If the inspector had not been alert, this mix would probably have found its way to the consumer, and it might have caused illness. In this case the manager of the plant had been called out of town and so was not on hand to prevent such an occurrence.

It is almost impossible to obtain labor that is interested in the work they are doing. Sanitation has probably suffered more from a "don’t care" attitude than from anything else. This frequently affects the quality of the product as well as being responsible for some of the mechanical trouble now occurring in over-worked equipment.

Most plants in Florida, and all those in military or naval zones, are overloaded. Plants in cities in which large war production plants and military and naval personnel are located are operating 24 hours a day. The result is that most of the equipment is beginning to show signs of wear and tear. Mechanical breakdowns are becoming more and more frequent. This is due not only to being overloaded but to loss of practically all good maintenance men and inability to obtain new parts for worn out ones. The equipment is not properly cared for, and repairs are only temporary. Worn-out equipment is harder to keep clean than equipment in perfect condition.

Another problem becoming all too evident is the lack of proper refrigeration in many plants. A great deal more refrigeration is needed when plants are operating around the clock than in normal times. Florida has very few large plants that manufacture ice cream only; practically all of them are combination milk and ice cream plants. Plants that were designed to handle 3,000 gallons of milk a day are handling over 10,000 gallons a day to try to supply the needs of the increased population and the personnel of the armed forces located in this State. Since expansion is restricted to a minimum by federal order, the mix is not being properly cooled and stored.

Food Distribution Order No. 8, issued by the Secretary of Agriculture, effective in February, 1943, restricted the use of total milk solids in frozen desserts to 65 percent of the amount used during the year ending November 30, 1942. This order and the scarcity of fluid milk and cream for manufacturing purposes have lowered to some extent the quality of the ice cream sold as compared to that sold in the past. The appearance, flavor, body, texture, and food value are not up to the standards established before this war started. The amount of fat has been cut between one and two percent. Formerly the base of a mix was whole milk, about 4 per cent of fat from the milk, and the remainder of the fat came from bottling-grade cream or plastic
Today the base of the mix is frequently water, and the fat is derived from any dairy product available. The change in the solids not fat is just as decided; formerly the milk base supplied all but 3 percent of the solids not fat. Today solids not fat are supplied from the available forms of dairy products such as sweetened condensed, condensed skim, and milk powder. Sweeteners are now sugar, brown sugar, maple sugar, corn sugar, honey, invert sugar, or a mixture of these in different proportions.

The ice cream maker is fortunate that the consumer is fully aware that he cannot get the materials with which to make his usual quality of ice cream and also that most consumers are glad to get anything in the way of foods. We only hope they will demand the former high quality of ice cream during the post-war period so that competition will be a decided factor in bringing things back to normal in the industry; this will be of great help to the inspector in his work at that time. We have to overlook many things that are unavoidable during the emergency and at the same time see that the frozen desserts sold meet as nearly as possible the standards set by law and that the plants are kept clean in spite of the many difficulties.

Supplies for package goods are a problem, not only from the manufacturers angle but from the standpoint of enforcing labeling requirements. It is almost impossible to keep a stock of legally printed packages on hand. The result is that someone is violating the law most of the time. We are still managing to keep the labeling violations to a minimum, but it is becoming increasingly difficult for the dairy supply houses to supply the demand for cartons and cups.

Another problem confronting us is control of the practice of adding other ingredients to a legally compounded mix. There are many small ice cream manufacturers in Florida who do not have pasteurizers and therefore who must buy their mix. The limited quantity of mix that the manufacturer is permitted to sell this class of operator is so inadequate that he is sorely tempted to stretch his mix and increase the amount of ice cream for his customers by adding other ingredients to the mix. This lowers the quality of his product both by exposing it to contamination by tampering with the pasteurized mix furnished him and by bringing the fat and solids content below legal requirements. So far, a warning that this practice was against State regulations has been sufficient to bring the operator back in line.

Florida's problems in the ice cream industry are no doubt those of other states, and we join the control officials in the other states in hoping that this war will soon be over and conditions will return to normal.

WARTIME PROBLEMS OF THE HEALTH OFFICIAL

ANDREW J. KROG

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1. Ice Cream under F. D. O. No. 8

Recognition must be given this year to the extraordinary state of the ice cream industry due to regulation by the War Food Administration through Food Distribution Order No. 8, as well as by general economic conditions.

The curtailment of production of ice cream plants, as stipulated by F. D. O. No. 8, to 65 percent of that of the "base period," the reduction of serum solids to 80 percent of the butterfat content, the maintenance of the total dairy solids to below 22 percent of the mix, should not necessarily affect the sanitary quality of ice cream.

In addition to the legislated regulation by F. D. O. No. 8, however, the