

THE ROLE OF MANAGEMENT IN DAIRY AND FOOD SANITATION¹

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It is first necessary to draw a guideline as to what area management comprises. The Winston Dictionary defines "management" as "the act or art of conducting or controlling, administration, control, prudent dealing, skilful direction, those collectively who are responsible for the direction of an enterprise or business." It is unfortunate that many in positions of responsibility have forgotten the word "collectively" in the definition. Consequently, management in the minds of many depends on the position they hold in the so-called chain of command. Management may be from General Manager up to President, or it may start with the foreman, depending on the thinking of the individual. Often foremen are in a "no man's land" due to top management action. In short, they are foremen in name only. They don't belong to a union but they don't fit into the management and, as a result, are men who (a) are paid wages, (b) are not given any real authority and (c) are intentionally kept "uninformed" by a management that's interested only in executives at the top.

The importance of sanitation in the manufacture of all food products in today's market cannot be over-emphasized. Laboratories all over this continent are continually devising new methods and techniques to assist in extending the shelf life of food products. Our laboratory, in conjunction with Mr. A. Catchick, quality control supervisor of the Dairy and Poultry Pool, has a paper in the press outlining a method which will assist the laboratory in pinpointing post-pasteurization contamination of dairy products in 16 hours. It has an accuracy of about 80 percent and is far superior to the coliform test for routine control. This type of information is crucial to management. If it had been available earlier, it might have assisted in eliminating a pathogenic strain of *Escherichia coli* (serotype 026:B6) which was isolated from a Canadian dairy product during a survey of isolates obtained from various public health laboratories across Canada, which was conducted by our laboratory last year.

MANAGEMENT MUST RECOGNIZE ITS RESPONSIBILITIES

This brings us to the first and most important role of management in sanitation. Management itself must recognize the necessity of a sanitation program and must be convinced that good sanitation is the basis for the manufacture of top quality products.

It may be that communications by the press, radio and T.V. have over-accentuated the number of food-borne infections occurring on this continent but just in the recent past there have been a number of incidents reported, such as salmonellae in dry milk and barbecued chicken as well as *Clostridium botulinum* in smoked and canned fish. Those of you who are in the milk business know that the 1966 Surveillance Report No. 49 showed 22 dry milks in this country containing salmonellae. This is inexcusable and management must accept the responsibility.

Not long ago an interested visitor went through 3 dry milk plants. At one he was told that the laboratory had isolated *Salmonella* organisms from 1 dry milk run. The sample was forwarded to an independent laboratory for confirmation. The result came back negative and all in that plant breathed a sigh of relief and completely forgot their plan of action for a complete sanitation program—and it was certainly needed.

It is significant that the managers of all these operations were originally trained in small plants. In the past, the amount of quality control and sanitary practices followed usually depended on the size of the operation—the larger the operation the greater the amount of quality control conducted and sanitary procedures followed. In many instances small operators have had good records in overall plant gradings. This, we are aware, was due primarily to the small operation which had a few producers and these were personally known to the manager and were easily controlled. Further, produce was handled the same day, absence of complicated equipment made cleaning a simple procedure and multiplicity of package size was no problem. It is rather unfortunate that small operators had such a good record of quality because many in the position of management today have come up through this type of oper-

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ation and sometimes do not realize the significance of all facets of sanitation (the practical application of scientific knowledge to the preservation of health).

Matthew Arnold wrote over 100 yr ago, "Faith in machinery is our besetting danger . . . as if it had a value in and for itself." In this age of computers and automation, there is still the tendency of management to rely on machines and to give too little emphasis to lower echelon workers. The prime requisite to insure the success of a complete environmental sanitation program is the interest taken and the example set by management. In the eyes of the employees any disinterest at the top is magnified a hundred times and will quickly be reflected in the employees' actions and attitudes.

NEED FOR MANAGEMENT INTEREST IN QUALITY CONTROL

History has a habit of repeating itself and in looking back to Solomon, one of the world's most brilliant minds, we find that he said, "Where there is no vision, the people perish"—(Prov. 29:18). Management, or any member of management, approaching the task of facing up to the problems of the food industry in a purely selfish way and without the interests of the consuming public in mind, lacks the vision which must exist if the organization is to continue as an effective instrument. It can be seen, therefore, that it is most necessary to have a clear insight into and a firm grasp of the principles and purposes of a complete sanitation program. W. C. Lawton has stated, "The food industry in general knows the concepts of quality, but many do little about it unless motivated by one of three things: (1) Regulation; (2) Customer complaints; and/or (3) Economics. In the past there used to be a pride of label built into products, where companies took special care to turn out the best product their knowledge permitted in an effort to satisfy the customers. Today, many practise the idea of minimum quality."

It is known that laboratory control and supervision of all operations in a food plant by competent technicians is, of course, a must. Too often this phase of management becomes so routine that it ceases to be effective. One example, concerning regulation, will illustrate this point. For some time sediment tests on butter have been conducted by central laboratories in Canada and the results are reported to the individual plants. One plant in our area had been running from 0 to 10% acceptable and management advised that they were following all procedures to produce an acceptable product. When 10 out of 10 churnings were reported unacceptable, an inspection was made. Neither salt nor neutralizer

was properly protected. No attempt was made to filter the water. Cans were inadequately washed and returned to the producer. Only one very inadequate attempt was made at filtering the cream—and that in the wrong place. Not one of the recommendations for prescribed methods for handling the product had been followed. Changes were made and the following grading report showed 100% acceptable results.

This is only one example of many that could be cited, but it does point out the veracity of the statement of J. L. Goddard, U. S. Food and Drug administrator, when speaking about salmonellosis: "Although a major part of the initial contamination comes from such things as fish meal and a wide variety of animal and poultry products, we are convinced that a prime offender is a general carelessness about the basic principles of sanitation in many processing plants." Thus, K. F. Meyers' statement, "Filth is filth, whether it is cooked or raw, safe or harmful, visible or invisible to the naked eye", should be a prime factor in motivating food plant management personnel to maintain strict sanitary control.

EMPLOYEE TRAINING A MANAGEMENT FUNCTION

During the past decade there has been a major consolidation of food plants and, as a result, operations are much larger. Out of this has grown an organizational chart which shows on paper clear-cut goals and responsibilities. Unfortunately, clear-cut responsibilities are usually limited responsibilities which, like the army, follow a chain of command, where the employee is expected to respond wholeheartedly. This is supposed to minimize the amount of training necessary for the rather large turnover in help. As C. Argyris states, "Many employees adapt to the organization world by withdrawing from their work and by limiting their involvement in it." It is the only safe way the employee has of maintaining some semblance of self-esteem and still producing. It is extremely necessary that employees below the rank of foreman be recognized for their worth, yet the lower one looks down the organization chart, the more technology controls human behavior and attitudes in this day and age. Consequently, it is essential to give better training rather than less to these employees instead of depending on automation.

The last decade has seen the highly specialized occupation become commonplace. Thus the growing complexity of our various food plant operations has reopened the gap between school and employment. It has been found that many of the special skills and much of the knowledge required today can only be properly acquired through a system of "on

the job" training. However, this type of training in no way resembles the old apprenticeship training under a new name. It is designed to create through selective training potential management personnel for the future as well as a stimulus to better morale and greater efficiency. P. T. Young wrote, "Human efficiency depends (also) upon what is commonly called morale. The morale of a man is his attitude toward his work. The morale of a worker is changed by such incentives as praise and reproof, rewards and punishment, working against a competitor or as a member of a co-operating group, working with knowledge of results or no knowledge, achieving success or failure, working with a definite aim or with no purpose."

A well-planned staff training program need not necessarily be an expensive undertaking but it does take time and thought and persistence. The lack of any such program, however, can be very costly. For example, the withdrawal from the retail market of dry milk solids containing salmonellae has created a feeling not only of uneasiness on the part of many consumers regarding the wholesomeness of milk powder but also a doubt as to the safety of prepared foods in general. If sanitation, safety and housekeeping training programs had been in force, it is very doubtful that this would have happened. Staff training reduces turnover, increases production and improves co-operation and morale. However, probably one of the most interesting by-products is that communication between management and employees becomes easier and more direct.

How much training is necessary and what form it takes varies greatly from one food industry to another and from job to job. But the fact is becoming clearer every day that every food plant requires a training program for personnel, regardless of their past experience or educational qualifications and it is a sound investment.

EMPLOYEE ATTITUDES IMPORTANT TO MANAGEMENT

Too many top management personnel are too busy to realize that industrial relations within the plant are made up largely of attitudes. It's the way that people look at things that counts and, unless employees understand the what, why and how of sanitation, housekeeping and safety as outlined by management the fullest support of any program cannot be expected. This imposes on management the obligation of building on two fronts: the emotional front and the intellectual front. When a meeting of minds is desired, nothing is more important than to explain, and there is nothing in a good training program that management cannot make intelligible if it is approached the right way. But following im-

mediately behind the facts must come a relation of the facts to the individual lives of those affected by them. It is possible, in some extreme cases, that the relationship between management and employees has reached the point of no return and cannot be brought back.

Be that as it may, what management can do is to point out how essential environmental sanitation is in a food production plant, — that an atmosphere of good maintenance, interest and care are all part of a sanitary program. Without a "do it now" philosophy on the part of management, every day maintenance degenerates into a serious problem which will affect all sanitation practices in a plant. All too frequently, sanitation and maintenance are haphazard procedures. Unless someone is made responsible (and that someone must have an interest as well as initiative to keep on top of the many problems which develop), the conducting of a program for stabilization is impossible. This is the duty of supervisors or foremen but they must have the support of all senior personnel.

Unless management views the sanitation program and any changes contemplated through the eyes of the worker, how can it tell what needs to be clarified so that the good points of the program can be made visible to the worker? The senior executives sometimes ask at this point, "But what about the supervisors and foremen, isn't that their job?" Certainly, the supervisor is the key man and the natural person for an employee to turn to when he wants to know something. However, he can only do an adequate job when delegated that authority. This is the area where programs break down — where the general manager does not in many cases consider the rank of foreman as management and will not delegate responsibility.

Recently a visitor to several food plants asked the following question in each: "Do you have a training program on environmental sanitation operating and, if so, what are the results?" The answers ranged all the way from embarrassment, evasion, halting answers to a discussion of well-organized plans. In better operated plants it was mentioned that they had not achieved their goal by an overnight crash program of inspection and criticism—rather it was a plan developed over a period of time and included safety as well as sanitation. The original system began as a safety program but it was realized that housekeeping, maintenance and sanitary practices were of such an order of importance that if these were controlled, so was safety. The top management in these plants not only established but maintained an active interest in the whole training program.

Probably one of the best ways of interpreting why some food plants have excellent records of safety and have extremely well-operated sanitation programmes is to look at the reasons for complete failure in others. As an example, there are listed below the reasons for business failure (in these instances, complete collapse) in percentages in Canada for a rather typical year by Dun and Bradstreet.

<i>Cause</i>	<i>Per cent</i>
Neglect	2.2
Fraud	0.3
Lack of experience in the line	4.4
Lack of managerial experience	46.2
Unbalanced experience	12.2
Incompetence	32.9
Disaster	1.3
Reason unknown	0.5

More than 95% of business failures reported were due to lack of experience, lack of managerial experience, unbalanced experience and incompetence. In other words, nearly every collapse could be placed on the shoulders of management and the same can be said for poor environmental sanitation programs in food plants.

CONCLUSION

No attempt has been made in this paper to tailor a set program for environmental sanitation in any specific food plant, nor have any hard and fast rules been elucidated on co-ordination between top management, superintendency, supervisory and foremen personnel and laboratory control. The synchronization of these groups in plant maintenance, safety and housekeeping will form the nucleus of an environmental sanitation program—but certain rank and file employees must be included to insure success. Too much emphasis has been placed on plants having modern equipment which is designated “fully automated” but require personnel to operate, and frequently the equipment is more prone to ills than man. In closing, the old cliché is stated, “Poor sanitation in a modern food plant is much less desirable than a plant with more modest appointments but with an awareness of sanitary practices for satisfactory processing.” Only interested management can indoctrinate all employees on the necessity of environmental sanitation with a continuing well planned educational program, and two major accomplishments will ensue: (1) food products will be safe from a public health standpoint; and (2) food spoilage will be controlled.

RELATIONSHIP BETWEEN DISEASE AND REFUSE

The Public Health Service's National Center for Urban and Industrial Health in Cincinnati has released the first survey of literature dealing with the relationship between disease and the 800 million pounds of refuse Americans throw away every day. The engineer's term for this kind of pollution is solid waste.

Jerome H. Svore, Director of the Center, said the publication, *Solid Waste/Disease Relationships*, may prove to be a landmark on the road toward safe and sanitary solid waste disposal.

The book was written under contract with the National Center by Thrift G. Hanks, M.D., of Aerojet-General Corporation, Azusa, California.

Among other things, it was found that there is strong evidence that the collection of refuse is one of the most hazardous occupations, partly because of an absence of injury prevention programs among sanitation workers. The

book discusses disease associated with such problems as chemical wastes, flies, human waste, animal waste, rats and mosquitoes.

The author scanned approximately 350,000 titles to write the 179-page publication. It will be used primarily by the health professions and by researchers in the basic medical sciences.

Four companion volumes to the publication contain the annotated bibliography of the 755 titles cited by the author. These volumes are on microfilm and are available at the University Microfilm Company, Ann Arbor, Michigan 48107.

Single copies of the basic publication may be obtained by writing to Richard Vaughan, Chief, Solid Wastes Program, National Center for Urban and Industrial Health, 222 East Central Parkway, Cincinnati, Ohio 45202; or from the HEW Press Office, Room 5541, North HEW Building, 4th and Independence Avenue, S.W., Washington, D.C. 20201, telephone 962-2548.