Know the Score in Your Food Markets

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ABSTRACT

To close the quality control circle, suppliers of perishable foods to markets must be rated. Once or twice a year quality control records of these processors should be surveyed to see that proper records, controls, and bacterial counts are available. Inspections should be made to see that suppliers have the necessary facilities kept in correct condition. When food markets have inspection forms and gained knowledge to use these materials, they are well on the way to know the score in their store. It is then up to management to educate and motivate all employees in the importance of excellent sanitation control standards. These standards must be set high and must be checked honestly and regularly. Finally, market management should keep a file of inspection records and take pride in improving scores.

Food markets must provide consumers with more than attractive packages and surroundings. Products sold inside these stores must have been prepared with a knowledge of, and compliance with good sanitation procedures. These sanitation standards must be worthy of the customers’ trust.

Food chains and associations must recognize that the individual store is too often the weakest link in the sanitation chain of food handling, and they must work to educate and strengthen this final guardian of quality foods in proper food protection.

The United States Department of Agriculture Seal, USDA, on meat means little if such meat is cut with dirty knives, on an unclean block, placed in greasy lugs, and then ground in a grinder that has not been regularly washed. United States Public Health-approved milk can spoil if this market does not store and display such milk under proper refrigeration.

The best prepared food held under ideal conditions can develop flavor problems if a program of rotation is not instituted and some idea of shelf-life of various food products is not understood at the store level.

In trade magazines we see articles with the titles such as “New Sanitation Regs.—Look Tough.” We see articles that describe how few hamburger samples examined in state regulatory laboratories meet bacteriological standards. We see articles by food associations that often criticize new inspection requirements and food quality standards as being impractical or as showing too little knowledge of market operations.

Often food stores do not seem to be concerned with quality standards of foods that they prepare until regulatory agencies provide and begin to enforce such standards. Too frequently management and department heads have failed to spend the necessary time on grading or establishing market sanitation guidelines. In many instances failure of any of the stores’ meat, dairy, or delicatessen departments to meet regulatory microbial or sanitation standards seem to bring a cry on the part of food markets for relaxing such standards or in transferring blame to their suppliers. Regulatory inspections made of food stores are often criticized for not being fair. Field sampling of foods is said to be left to individual inspectors who inspect markets in a convenient location and fail to check and sample foods and stores that are away from main travel areas. Others complain that nearby competitors were not being rated.

On the other side, inspection departments of regulatory agencies often feel that markets consider fines imposed or the inconvenience of attending hearings on violation of sanitation practices as just a cost of doing business. In many instances more effort is spent on getting to know inspection personnel and discussion mutual problems than on reestablishing a mutually designed and effective quality control program in the market.

The individual market must not wait for public opinion to force it to improve its sanitation practices. If a serious food poisoning problem or any violation in the food processing area of a market is released to the news media, corrective action is swift—but at a tremendous cost. Ask the cranberry, dairy, mushroom, and fish industries what this lack of public confidence means.

Markets and food associations must accept the challenge of improving the food that is processed. They must accept the quality control responsibility that is necessary when the stores’ products and especially when the markets’ labels are offered to the public.

Markets should work toward a goal of self-regulation within a framework of mutual cooperation between regulatory, health, and educational agencies in formulating a sanitation program. It is time for food stores to act and not wait to react to other interested parties in the food field.

QUALITY CONTROL SCORING

It is in the perishable food preparation area of the market that we should begin our quality control scoring. A scoring form should rate and list requirements that are uniform for each of the perishable food areas; sanitation requirements for the meat departments are equally important in the produce and delicatessen sections of the store.

The model sanitation score forms that follow were made after checking
numerous food industry requirements as well as consulting and observing food processing in many markets.

Items that are frequently marked on the scoring form include the following.

1. C. Separated facilities for potential hazardous food and materials. (a) Glass bottles should never be stored on open shelves over sinks or above food preparation areas. (b) Lights over foods and food handling areas must be shielded. (c) Pesticides and medicinals should be stored away from food areas. (d) Returned and rejected perishable foods such as meats should be stored in closed plastic containers away from fresh food. (e) Iced poultry should be stored in a separate well-drained trough. (f) Raw meat and raw fish should be stored separate from cooked meats and salads in the deli case.

1. F. Utensils and equipment corrosive resistant. (a) Plastic and stainless steel are preferred over aluminum for food platters, lugs, etc. (b) Plastic cutting blocks and plastic knife handles can be cleaned and sanitized more effectively than a wood surface.

2. C. Attached fans and fixtures. Meat track switch handles, door latches, vents, and air-conditioning fans must be regularly cleaned.

3. A. Movement. Often food is brought into the preparation rooms from coolers and is cut, blended, wrapped, and stored. (b) Beef cannot be cut on equipment used for raw poultry unless equipment is properly cleaned and sanitized between use.

3 C. Rotation. All perishable food should be dated. This date should be the final date when such food is offered for sale. This shelf-life date must be realistic. To do this, flavor and bacterial tests should be available both for date of packaging as well as for the expiration date of such food products. Too often the expiration date is picked with commercial consideration, rather than with quality record. Proper rotation of perishable food must be maintained for a dated food program to be effective.

4. D. Cleaning utensils. (a) Cloth towels or sponges should not be used in cleaning and drying food handling equipment. (b) Cleaning brushes should be clean and properly stored.

5. B. Equipment storage. Equipment should not be stored nested unless completely drained and dry.

5 C. Single service items. These should be stored in a closed container or else stored inverted.

7 A. Water supply. When private water supplies are used in the market, yearly water purity tests must be taken.

8. C. Personnel. Eating, smoking, and clothing storage must be separate from food processing departments.

11. VEHICLES
A. Deliveries made in clean properly constructed vehicles refrigerated for perishable foods
10. C. The back room. This section in a market must be neat and clean with food products stored properly off the floor. Poor housekeeping is found in many back rooms. These rooms must be considered as an important area where proper food handling methods must be maintained.

11. Vehicles. Stores must insist that their food deliveries arrive in proper vehicles.

TABLE 2. End of operation inspection

While it is important to make an inspection during the food processing, it is equally important to make an inspection when the food handling equipment is expected to be properly cleaned and stored.

All food handling equipment and food contact surfaces must be inspected: Tables, grinders, knives, saws, etc. are examined and any equipment found dirty are listed under department at fault.

The addition of bacteria from dirty food handling equipment affects adversely both the keeping quality and the flavor of the prepared foods.

DIRTY FOOD EQUIPMENT

<table>
<thead>
<tr>
<th>Meats</th>
<th>Produce</th>
<th>Deli</th>
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Comment

TEMPERATURE CONTROL

Once a perishable food product has been produced under proper sanitary condition, it is important to maintain quality and prevent spoilage of these foods. To do this, proper temperature control must be observed. Coolers and display cases for fresh meat, dairy, and deli cases products must be kept at temperatures between 35 and 40 F.

Food preparation areas, such as for meats, should be kept at below 50 F. But in all perishable food areas, food must move quickly from cooler to display case. Frozen foods must be maintained at 0 F or below.

Temperature control must also take into account temperature fluctuations. Even if no health or bacterial problem is caused by such temperature variations, serious flavor or problems may develop in foods.

Temperature fluctuation can cause sandiness in ice cream, can cause development of rancidity in milk, and can bring about excessive bleeding in meats.

Every store manager should know maximum temperatures changes in each food section. This includes time and temperature checks on the defrost cycle. To do this, it is necessary to have the tools of the trade; an accurate, easy to read thermometer in each refrigerated cooler and display case, plus a check thermometer in each store.

It is important to know where to take correct product temperatures. A thermometer with its bulb placed in an air duct does not represent the temperature of food in the refrigerated case. Because of the many ambient s, such as the temperature of the store, air currents, position of display lights, etc., a correct product temperature should be taken between two food packages in the center of the display cases.

Perishable foods must not be displayed above the load limit line in the case and should not be stored so as to block circulation of cold air in the case.

In the delicatessen, it is important to keep hot products, such as barbecue chickens, in a closed display case with a temperature maintained above 140 F.

Finally, proper temperature controls will increase the shelf-life of perishable foods. At 40 F milk should keep for 10 days. At 45 F, this same milk will keep for only 5 days.

Temperatures in different locations of the store should be recorded on a form such as in Table 3.

TABLE 3. Temperatures in the store

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<td>H. Miscellaneous</td>
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STORE APPEARANCE

Certainly markets must continue to be efficient, bright, and attractive. A quality control program must include what the customer sees; the store's shine. While this is often the area where emphasis in cleaning is placed, it is important to check each store to see that management knows what appeals to the customer. This again can be done best with an inspection form (Table 4).

TABLE 4. Store appearance

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</tr>
</thead>
<tbody>
<tr>
<td>Neatness</td>
<td>Condition</td>
<td>Cleanliness</td>
<td>Beauty</td>
<td>Aisle</td>
<td>Display</td>
<td>Display</td>
<td>Display</td>
<td>Display</td>
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The rating must begin with the location where the customer enters the store's property—at the parking lot. Include the condition and cleanliness of the sidewalk and the store entrance, cover employee appearance, and place special notice on areas that patrons stop for longer periods such as food preparation departments and check-out counters.

The finish on floors, walls, ceilings, shelves, and display cases should be bright, smooth, and clean. Aisles should be free of clutter. Merchandise should be stored neatly, in good condition, and free of dust and dirt. Surroundings of the store must be properly drained and kept picked up.

It is the store's appearance that the customer compares with that of other competing markets. The psychological feeling of cleanliness and the market's arrangement can readily relate to the consumer and equal repeat sales. It can prove valuable for an inspector to compare and rank a market with its nearby competitor.
LABORATORY CONTROL

With attractive surroundings, efficient services, proper temperature controls, and food handling equipment that looks, smells, feels, and is clean, the market is well on its way to a high level of customer acceptance and customer satisfaction. However, there is another field of quality testing that the market should consider—laboratory control.

A market can never rely totally on bacterial counts for its quality control program. Many perishable foods have no bacterial standards. Certain foods that are frozen, have added inhibitors, or pH values away from neutral can result in lower bacterial counts after a period of storage than they were on date of preparation.

There are two classes of bacterial counts. (a) Quantitative standards or guidelines such as results of the Standard Plate Count. These are bacterial standards or guidelines that authorities have set at values that they feel the particular food can meet with proper attention given to cleaning, sanitizing, housekeeping methods, and temperature control. (b) Quality standards or guidelines such as counts of *Escherichia coli*. These are bacteria that authorities feel either should not be present in the product tested or should be present in very small numbers. These bacteria should be destroyed by proper processing methods and adequate sanitation should keep them out of processed foods. Presence of these bacteria indicates post-processing contamination and a possible health threat.

Swabs taken of "cleaned" food handling equipment can be tested by aerobic plate count method as well as by the coliform method to check the efficiency of cleaning, rinsing, and sanitizing procedures.

Of raw meat products hamburger can be tested by the aerobic plate count to check on proper quality control in the meat department. Foods such as milk and custards that are ready to be consumed can be checked with both a coliform test and the aerobic plate count.

These tests are inexpensive and together give a good indication of the quality of the foods tested. With this limited but valuable testing program, a meaningful start can be made to improving and protecting foods being offered to customers.

Simple!

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<tbody>
<tr>
<td>NEGATIVE</td>
<td>DOUBTFUL</td>
<td>POSITIVE</td>
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