

Sanitation Requirements in Quality Control and HACCP

by Diane M. Barrett

Sanitation is a key element in the quality control and/or HACCP (Hazard Analysis Critical Control Points) plan of an successful food packing-house or processing facility. Unfortunately, sanitation is something many of us don't like to think about and we often take for granted. The desire to implement good sanitation practices must be foremost in the minds of those responsible for achieving it. Various governmental agencies have set up regulations for minimum standards of sanitation, but without desire and commitment on the part of individuals designate to carry out sanitation programs, achievement of these standards will not be ensured. This article will describe governmental regulation affecting sanitation, and the steps involved in a typical sanitaiton inspection.

Governmental Regulation

The Good Manufacturing Practices described in the Code of Federal Regulations, 21 CFT Part 110, provide guidelines for the proper production of clean and wholesome food products which are to be shipped in interstate commerce. These requirements are also frequently enforced at the state and local level by Department of Health authorities. Failure to adhere to these guidelines may result in the production of an adulterated product, or product which is deemed to be adulterated as described in Part 402 of the Federal Food, Drug and Cosmetic Act. Adulterated foods are those which contain any poisonous or deleterious substance which may render it injurious to health or considered "unsafe" by certain definitions. This may

also be extended to unsanitary conditions during preparation or packing or the presence of filth or other extraneous material, cooked or raw, safe or harmful, visible or invisible.

The Food and Drug Administration (FDA) considers inspection of food packing and processing establishments one of its prime enforcement tools. Inspections are utilized as a means of determining whether or not food firms are in compliance with the FDA's laws and regulations. By inspecting your *own* facility as a routine part of your quality control program, you will be better prepared for an FDA inspection. In addition to the obvious need to prevent product adulteration, maintenance of good sanitary practices in a plant or warehouse can: reduce downtime, minimize possibility of product recall, enhance product quality, reduce material waste and improve employee performance.

Know Your Facility! Use HACCP!

Self-inspection and development of a HACCP plan specific to your facility are the most effective ways to maintain a sanitary facility that is in compliance with the federal regulations. If you assume the role of inspector and integrate sanitation into your quality control program, you can uncover potential problems and solve them before they become *big* problems!

One of the first steps towards a successful sanitation program is to walk through your facility, and develop both a flow chart outlining all production or unit operation steps, and a checklist to investigate major areas of concern. The U.S. Department of Health and Human Services has published an excellent guide titled *Do Your Own Establishment Inspection: A Guide to Self Inspection for the Smaller Food Processor and Warehouse* which offers sample checklists for each area of your facility. Here is an example of the Pest Control checklist from this publication.

HACCP is a systematic approach used in food production as a means to assure food safety. In a HACCP plan, one assesses inherent risks that may be present from harvest through ultimate consumption. A ranking scheme is applied to identify those points throughout the food production and distribution system whereby control must be exercised in order to reduce or eliminate potential risks. Once you have a good idea of the flow of product in your facility, and have established checklists for specific areas, it is important to designate "critical control points" which are any point

Pest Control Checklist

**Needs
Attention**

OK

If you hire an outside pest control operator, you should:

- Check regularly on what the pest control operator is doing. Don't accept what he's doing on faith.
- Check to see what poisons he is using. Make sure the poisons do not contaminate foods. Learn where and how many bait stations there are.
- They should be placed so as not to present any chance of food contamination.
- They should be checked regularly.
- Check to see if fumigators are being used. Do they represent a hazard to employees or food safety?

If doing your own exterminating, you should:

- Know there is no such thing as an all-purpose pesticide, especially where foods are concerned. Get qualified advice before using any poisons.
- Make a map showing locations of all traps, bait stations, etc., and check them regularly.
- Put money into building maintenance if that will help solve your pest problems. For instance, don't rely solely on rodenticides to control your pest problem and leave gaps in the doors for the rodents to enter. Make sure those gaps are sealed. Extermination is a poor second choice, and will cost you as much, or more, in the long run.
- Other **Pest Control** situations to explore:

or procedure in a specific food system where loss of control may result in an unacceptable health risk.

Sanitation Inspection

Incorporation of sanitation inspections into your quality control program will facilitate discovery of anything that might cause or permit contamination or adulteration. It is important to consider the product from the time it is first grown or raw products are produced until the finished product is in the hands of the final consumer. This section will outline specific areas to concentrate the sanitation inspection on:

- General facility surroundings** should be kept free from trash, weeds, spilled raw products, broken baskets or crates and any other accumulated waste or unsightly materials. The approaches to the facility shall be hard surfaced, oiled or treated to prevent and eliminate dust. There should be no standing water inside or outside the facility; poor drainage may cause accumulation of foul water and provide a breeding ground for insects.

- Construction and building layout** should be watertight to prevent rain and wind entry, and doors should close tightly so rats and mice are prohibited from entry. Floors of all rooms where food products are handled should be constructed of concrete or other equally impervious and easily cleaned material, and should be smooth, well drained and kept clean.

- Storage and warehousing** should be provided separately for raw and finished goods. All materials should be stored in tightly closed containers and aisles should be left open for product inspection. Storage areas should have good rodent and insect control. Hazardous materials should be stored in areas only accessible to authorized persons and should be well labeled.

- Water supply** must be from a known source from which data on purity and potability may be obtained. All water supplies must be checked to ensure there is adequate chlorination or other means of sanitary treatment. Pressure in water lines should be maintained at all times to prevent back siphonage which could draw contaminated materials into the water lines.

- Sewer systems** must be maintained separately from other waste disposal systems in order to prevent the possibility of toilet sewage backing up into the plant. A thorough check should be made to see that there is no danger of overflow or leakage from drains or toilets.

- Toilet facilities** for employees should be well-ventilated and well-lighted, and kept clean and dry at all times. Odors are not only objectionable and indicators of poor sanitary conditions, but they are attractive to insects. Handwashing facilities must include hot and cold water, soap, individual towels and conveniently located containers for used towels.

- Personal habits of employees** may have a more direct effect on food product sanitation than anything else in the plant. Employees must be aware that they are handling food products for human consumption! They must wear clean uniforms and proper hair coverings. Open sores, cuts or dermatitis on the hands are not permissible. Each crew should be responsible for keeping its own area clean during work hours and allow for intensive cleanup by regular maintenance crews.

Further Reading

Kramer, A. and Twigg, B.A. 1979. *Quality Control for the Food Industry*, AVI Publishing Company, Inc., Westport, Connecticut.

U.S. Department of Health and Human Services. 1984 *Do Your Own Establishment Inspection: A Guide to Self Inspection for the Smaller Food Processor and Warehouse*. HHS Publication No. (FDA) 82-2163.