factsheet
Pork Information Gateway

What Will HACCP Mean to My Business?

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Establishing a HACCP program involves conducting a hazard analysis, determining critical control points, establishing critical limits, developing a written plan, developing monitoring and documentation procedures, establishing a microbiological testing program and establishing a feasible ongoing verification program. Areas of economic concern for small processors include microbiological testing, mandatory changes in facilities to meet the USDA-FSIS requirements, chilling rate requirements and the need to have completely separated areas for cooked and uncooked products during storage and handling. Many small plants have fewer than 20 employees, slaughter one or two days a week, process a wide variety of products some of which are seasonal, and often custom process as well. These characteristics set them apart from large processing facilities with many skilled employees, that slaughter every day, produce a narrow range of products (in each plant) all year long, and do not custom process. The challenges to the small plant operator are largely those of scale, organization, time and knowledge.

HACCP (Hazard Analysis Critical Control Points) is a science-based process control system aimed at prevention of food safety hazards. The HACCP concept requires that potential hazards in the food processing environment be identified and controlled to minimize food safety risks. HACCP is not a quality control/assurance program; it is not concerned with characteristics such as color, purge or drip loss or product tenderness per se.

Who Is Responsible for HACCP?

HACCP differs from the traditional"command and control" approach to sanitation that we have operated under for years. Product safety, at every stage of production, is the responsibility of the food manufacturer. For this reason, the preparation, implementation and monitoring of a HACCP plan is the manufacturers responsibility. Regulatory agency representatives evaluate the consistency between the written HACCP Plan and the observable everyday activities during manufacturing. While there are still specific requirements for safe and sanitary meat/poultry product manufacture, the burden of ensuring product safety and managing the HACCP program is on the plant management and personnel.

SOPs and SSOPs

Standard Operating Procedures (SOPs) are in-house, written directions to employees as to how a specific job is to be done. An SOP may contain a requirement for recording information (amount of salt used in sausage) into a daily log. Equipment operations (grinding, stuffing) will occur many times throughout the HACCP Plan making SOPs an efficient method of handling these activities. The time invested in preparing SOPs saves training time, product loss and dollars, and gives some guarantee of consistency from employee to employee. In addition, some potential hazards can be averted through adherence to SOPs.

Sanitation Standard Operating Procedures (SSOPs) are the prerequisite to HACCP plan development. As of January 27, 1997, all plants were to have SSOPs operating to guide procedures which have specific sanitation implications, and hence food safety implications. The use of pre-operations checklists and cleanup checklists helps to ensure that all equipment and surfaces have been cleaned and ties job responsibility directly to specific managers/employees. USDA FSIS requirement for microbiological testing in slaughter plants to verify that the plants' process prevents/removes fecal contamination is a likely stumbling block for small processors. Information is available on collection of samples for testing, however the cost and availability of testing can be problems for small operators. State health departments can often supply a list of private laboratories that conduct microbiological testing; the lab can then tell you how to get samples to them.

A HACCP plan has several key elements which, if not properly handled, will most certainly result in the failure of the plan.

- Product description: what products do you make—every one must be accounted for in a HACCP plan. Can they be "grouped"together? Is it worth keeping them all—what is the volume of sales vs cost of HACCP?
- Hazard analysis—what are "hazards"? A hazard in a food product is anything that is dangerous to human health and is reasonably likely to exist in the food. The major focus of HACCP plan is microbiological hazards. Assessing microbiological hazards requires some background knowledge—you may need some outside expertise in making these assessments.
- Control of hazards in small plants requires correct identification of critical control points (CCPCs), places where a loss of control could result in an unsafe product. In small product, excellent sanitation and compliance with SOPs by line employees is a major factor since it is unlikely that they will have expensive technologies (steam pasteurization, steam vacuum) available to them. However, there are a variety of technologies such as acid or antimicrobial carcass washing that are effective, inexpensive and can be introduced into existing facilities. Alteration of the facility may require a substantial investment; some states have made moneys available to enable small processors to comply with HACCP requirements through the small business office. Chilling and cooking rates and temperatures are often CCPs; they can be monitored intermittently by a designated employee who takes temperatures periodically and records them, or continuously using temperature recording devices which print out charts of temperature at specific time intervals. The former requires employee time and conscientiousness while the latter requires an investment in equipment as well as intermittent cross-checks.

Who, What, When, How, and When?

How will the monitoring occur when you don't have a QC department? Small operators often rely on the plant manager to review pre-operational sanitation and daily records of all operations; the slaughter or processing room managers sign off on corrective actions in response to deviations, materials received, smokehouse, cooler and freezer temperatures and any other activities that occur in that area of the plant. This minimizes the need for any one person to move about the plant very much. The assessment of raw vs cooked product may be difficult unless there are at least two employees working in the processing area (one with raw product, one with cooked) particularly if both activities are continuous. However the plant manager can take over some of these responsibilities.

Verification

Verification, spot checking documented CCPs to be sure that they are under control (the temperature of the cooked sausage is what the recording device says it is) is one of the more difficult aspect of HACCP for a small operator because the employee verifying the information should be someone other than the employee collecting and monitoring the data (ie. not the plant, slaughter or processing room managers).

Recordkeeping

A critical component of HACCP is the maintenance of accurate records. As the HACCP plan progresses to the point where critical limits are set and the monitoring tasks are delineated, keep in mind which employee is likely to be where in the plant making him available to record information. Design your documentation (temperature log sheets, etc.) to be user-friendly—if they can be held by a clipboard hung on the wall by the equipment where the activity occurs, it is much more likely that employees will remember and record required information. It is easier to checkoff "reasons" (temperature too low-returned to smoke-

house) than to write out long explanations; if there are 4-5 common reasons for the occurrence of a deviation, offer those as multiple choice items with an "Other" category at the end on monitoring log sheets.

How Much Time Will This Take?

At the outset, small plant managers and HACCP team members can expect to invest a fair amount of time into HACCP. However, many of the activities associated with HACCP plan development are those that make a good business better but maybe overlooked because of time constraints. Re-evaluating the cost vs the benefit of producing a few specialty products is a good example. Lack of organization is a HACCP teams' worst enemy; once your materials are organized, it is a matter of sitting down and moving through the process for each product group. The first HACCP plan will be the most difficult and take the most time, but if the first one is prepared correctly, subsequent HACCP plan development will become progressively easier.

HACCP plan development courses for small meat/poultry plant operators and other types of assistance are being offered through a variety of venues: State Meat Processors Associations, State Cooperative Extension Services, National Commodity (Beef, Pork, Broiler, etc.) Associations, American Meat Science Association, the USDA FSIS and the International Meat and Poultry HACCP Alliance.

Electronic Information on HACCP:

International Meat and Poultry HACCP Alliance http://ifse.tamu.edu/haccpall.html

Hazard Analysis Critical Control Points (HACCP) http://www.colostate.edu/Depts/FSHN/safefood/haccp/

HACCP Database http://www.nal.usda.gov/fnic/food-borne/haccp/haccpfly.html. USDA and FDA HACCP Training Programs and Resources Database provides up-to-date listings of HACCP training programs, HACCP resource materials, and HACCP consultants offering training programs or resources.

Hazard Analysis Critical Control Points http://www.exnet.iastate.edu/pages/families/fs/haccp.html

Key Facts Hazard Analysis and Critical Control Point (HACCP) Systems http://www.usda.gov/agency/fsis/key-haccp.htm. Key Facts: HACCP Final Rule - July 1996

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