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What HACCP Really Means

One-on-one with Russell Cross, industry guru on HACCP.

Like many abstract concepts now taking hold of the beef industry, HACCP (Hazard Analysis and Critical Control Point) is hard to understand and hard to define. What is a simple definition for what HACCP tries to achieve for the beef industry?

HACCP is a production control system for the food industry. It is a process that identifies where potential contamination can occur (the critical control points or CCPs) and strictly manages and monitors these points as a way of ensuring the process is in control and that the safest product possible is being produced. HACCP is designed to prevent rather than catch potential hazards.

What happened in the meat industry to cause it to look toward HACCP as a food safety assurance method?

The entire food industry has become more market-driven, providing products that meet consumer demand. Consumers want more convenient, ready-to-eat, value-added products. The industry is using new processing and packaging technologies, such as vacuum packaging and precooked, microwave-friendly products, which may introduce different food safety challenges.

The introduction of new pathogenic bacteria is a constant threat. Also, consumers have heard the growing number of media reports about unsafe meat and poultry in supermarket cases. They have become more knowledgeable about the outdated inspection program still in place. The "sight-smell-touch" type of inspection is not sufficient for today's customer.

These factors all have contributed to the movement toward HACCP in the meat industry. HACCP has a proven track record for identifying and preventing contamination. Simply put, HACCP combines common sense with science to ensure safer food production.

How does HACCP relate to other industry programs such as Total Quality Management and Beef Quality Assurance?

HACCP is very complementary to Total Quality Management (TQM) and Beef Quality Assurance - the foundation is the same: do it right the first time and every time and you get a good final product. TQM is a management philosophy that supports employee and management cooperation to determine the best, most efficient way to produce the product customers want. It means doing the job right the first time and every time, without rework. Quality Assurance puts criteria in place to monitor and verify that you are providing the best quality possible - again, meeting consumer demand.

HACCP has the same objectives, but is focused on food safety prevention systems. HACCP is designed to focus attention on food safety areas and to monitor and check each step along the process to make sure the product is safe and the process is in control - instead of relying on the end product when it's too late to correct the problem.

Will HACCP help promote quality as well as wholesomeness? If so, how will that happen?

HACCP is designed to address food safety priorities. By focusing HACCP on food safety, the number of critical control points that are closely monitored and controlled are limited to those areas of greatest concern. If quality and economic adulteration concerns were built into a HACCP system, they would dilute the focus on food safety. However, implementing HACCP means greater control and closer scrutiny of the food production process, both of which will undoubtedly result in improvements in quality and wholesomeness. I believe a HACCP system can be applied to control inconsistencies in quality, such as tenderness, but it may have to be called something else in order not to dilute the HACCP program for food safety.

How does the [HACCP Alliance](#) fit into the picture? And what caused it to become so important?

The International Meat and Poultry HACCP Alliance was recently formed to address the growing HACCP training and education needs facing the meat and poultry industries. USDA's Food Safety and Inspection Service (FSIS) has put HACCP and its mandated use in the industry on a fast track. This fall the agency is expected to publish proposed regulations that will mandate how meat and poultry plants operate under HACCP programs. While the agency is expected to phase in HACCP, it will still require significant changes within the industry.

The Alliance will provide training and educational programs for meat and poultry plants on implementing HACCP plans that conform to the FSIS regulation. The Alliance may also help certify plants that are operating under HACCP plans that meet FSIS regulations. These activities, along with research and communications, are critical to the industry.

Who belongs to the HACCP Alliance? Where will the training and other activities occur?

The HACCP Alliance is made up of more than 55 meat and poultry industry groups, professional societies, universities and related food organizations. After leaving FSIS as administrator, I returned to Texas A&M University where I now head a new Institute of Food Science and Engineering. I also serve as director of the Center for Food Safety, a division of the new institute.

The HACCP Alliance is one of the center's major programs and much of its initial activities will take place at Texas A&M. However the Alliance will work with nearly 30 other universities to meet the training needs of the nation's 7,000 plus meat and poultry plants.

What will the function of this group be in relation to the beef industry? What segment will be most affected by HACCP principles?

The Alliance will work with all segments of the beef industry, from the farm and feedlot to the slaughter and processing plants and finally to food service and the retailer.

It is clear that meat slaughter and processing plants will be the most affected initially since HACCP has already been studied and applied in this segment. There are still so many unknown factors and research needed before HACCP plans can be developed for farms and feedlots, but certainly there is growing concern that contamination must be controlled long before animals enter the slaughter plant.

The use of HACCP in the retail and food service sectors is fairly well-studied and documented, but the large number of establishments within these sectors makes it a challenging task. The Alliance is working closely with the National Restaurant Association Educational Foundation and Food Processing Institute

to help reach this important segment.

Will models be constructed for preharvest producers such as cattle feeders? What changes do you foresee it causing in production?

Yes, HACCP models will be developed for preharvest operations. Preharvest operations pose new challenges, however, because there are still many questions relating to the incidence and prevalence of bacteria and other contaminants. For example we need to study and better understand how bacteria such as E. Coli 0157:H7 colonize in the bovine gastrointestinal tract and what factors contribute to maintaining contamination in an endemic herd. We influence the relationship for bacterial contamination. Until we know more about preharvest contamination, it is difficult to put intervention strategies in place.

Will feedyard operations have to coordinate HACCP programs with their suppliers?

One of the critical control points of a preharvest HACCP plan will likely include monitoring and verifying that feed and other inputs do not introduce or encourage contamination in the feedyard. Requiring suppliers to operate under HACCP makes sense and is likely to be seen throughout the food production process.

Who will be responsible for implementing HACCP in the different production levels (i.e. the HACCP Alliance member organizations, state associations, beef councils, etc.)?

Implementing HACCP will be a joint responsibility among all groups within the beef industry. Certainly, the HACCP Alliance members are committed to providing funding and resources for developing training and educational materials for the industry. There is still a tremendous need for research to identify how best to prevent and control contaminants within various segments of the industry.

When will feedyard operators have the information they need to begin implementing HACCP principles in their daily operations?

There is significant information available today that explains the philosophy behind HACCP and the seven principles to follow to implement HACCP. Feedyard operators can begin to study and research HACCP and attend training classes that discuss how HACCP will be applied in the industry.

The Alliance will provide information through newsletters and new materials about progress made in better understanding the preharvest sector and how to apply HACCP in feedyards. We will report on efforts by the Animal and Plant Health Inspection Service of USDA to identify critical control points and establish HACCP models for preharvest operations.
