Hazard Analysis and Critical Control Points (HACCP) Management System at the Producer Level

Cindy A. Kinder
Extension Educator, University of Idaho

Hazard Analysis and Critical Control Points (HACCP) is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards. HACCP systems are applied at various production segments from raw material production (including animal production); procurement and handling; to manufacturing, distribution, and consumption of finished food products.

Consumers demand a safe, wholesome, high quality food product, and all livestock producers have important roles in producing that product. The use of the HACCP system places emphasis on the quality of all ingredients and all process steps so that safe products will result. The system is designed to control potential problems at the point of production and preparation.

The HACCP concept was started at the Pillsbury Company in 1971, in collaboration with NASA (National Aeronautics and Space Administration) and the U.S. Army Research Laboratories. The goal of the program was to provide a food product that was absent of foodborne organisms, so astronauts would not become ill in space. Since then HACCP programs have been implemented throughout the food industry, particularly within the meat industry.

HACCP at the Producer Level

Producers raise and care for animals that will become part of the human food chain. Thus, livestock producers have active roles in maintaining a wholesome food product. Studies have shown that injections given to calves at branding (50 days of age) and/or weaning (205 days of age) can cause injection site blemishes, thus decreasing the quality of meat.

As with any biological system there are risks. If problems are limited, however, a better and safer product will be produced. HACCP plans help producers recognize potential hazardous areas and establish corrective actions in order to provide a wholesome and safe food product.

A team of people, including the owner, manager, and worker(s), need to work together in preparing the HACCP plan. Producers should also call on livestock specialists, feed consultants, extension educators, veterinarians, and others to be part of the process to help them understand and regulate hazards that can be present in their operation.

HACCP Principals

Seven principles need to be considered in order to form an HACCP plan.

1. Conduct a Hazard Analysis

Develop a list of hazards at each processing step, which can affect quality if not controlled. The identification of potential hazards will indicate modifications needed to a process or procedure. Examples at the producer level may include new livestock arrivals, sick pen, incoming feed, midseason treatment, and shipment of finished livestock. It is important to consider the ingredients and raw materials used at each step in the process, plus product storage, distribution, and final preparation.

Producers need to decide which potential hazards must be addressed in the HACCP plan. These hazards should be based on severity and likely occurrence. Hazards identified in one operation or facility may not be significant in another operation producing the same or a similar product.

2. Determine Critical Control Points (CCP)

Critical control points in a procedure are places at which control can be applied and are essential to prevent, eliminate, or reduce, to an acceptable level, a hazard. The identification of CCP is important in controlling hazards. One way to help identify each CCP is to use a sequence of questions called a CCP Decision Tree (Fig. 1).