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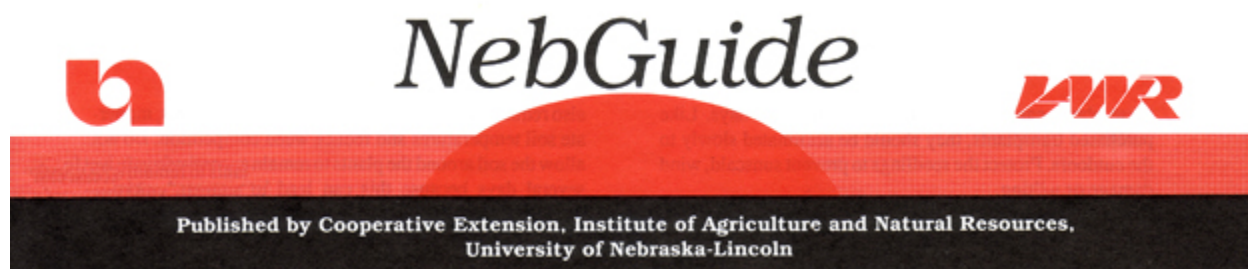
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Developing Beef Quality Assurance

This Neb-Guide gives guidelines for developing a feedlot beef quality assurance program.

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- [Why Get Involved in Beef Quality Assurance?](#)
- [Beef Quality Assurance History](#)
- [Overcoming Barriers](#)
- [Getting Started](#)
- [BQA Road Map](#)
- [Start With The Basics](#)
- [Specific Control Areas](#)
- [Monitoring BQA Production](#)

The displacement of people from agriculture into other areas of employment has broken the relationship between most consumers and producers. The consumer's lack of knowledge about agricultural production coupled with concern for misuse of technological advances in agriculture has created great concern for the safety of their food supply. Consumers are worried that their food will be contaminated by antibiotics, hormones, and agricultural chemicals. Recently, bacterial contamination of beef has been added to their fears. These concerns, combined with diet and health concerns for eating red meat and the cattlemen's use of the land, place tremendous pressure on the beef industry.

Why Get Involved in Beef Quality Assurance?

The news media scouts for spectacular stories. While the beef quality assurance program may not be the kind of spectacular story the media is looking for, getting involved with the program is one way to show the media and consumers that cattlemen raise beef responsibly.

In addition, with today's climate favoring government control and civil litigation, involvement with beef quality assurance can provide cattlemen with an important key for avoiding government regulation or defending a civil lawsuit.

Beef quality assurance is a good business practice that identifies and avoids potential production defects.

A consumer loses confidence in beef when they find a defect that escaped a cattleman's facility and entered the food chain. Loss of consumer confidence in beef causes significant changes in their eating habits. The recent *E. coli* scare is evidence of the tremendous market loss the beef industry can suffer when consumers lose confidence in the safety of beef.

Beef Quality Assurance History

Consumers want safe food. To some, organically produced food is thought to answer the food safety issue. If organically grown food meets the same rigorous government standards as food produced by modern agriculture, it can be assumed to be safe. Likewise, if government approved technologies are applied appropriately, beef will be safe.

In 1980, cattlemen became concerned that they would lose the modern production tools they had come to rely on to improve the performance and well-being of cattle. To prevent that from happening, methods to ensure that their production practices were safe and would pass the scrutiny of the consumer were investigated.

In 1982, the United States Department of Agriculture-Food Safety Inspection Service (USDA-FSIS) began working with the beef industry in the United States to develop the Pre-harvest Beef Safety Production Program. The USDA-FSIS program was aimed at avoiding residues. Not wanting any additional governmental regulatory programs, and wanting a quality control program that was more inclusive than avoiding residues, the beef industry began developing the Beef Quality Assurance (BQA) program.

Between 1982 and 1985, three feedlots targeted evaluations of their production practices and, with the help of the USDA-FSIS, assessed residue risks. In 1985, after careful analysis and adjustment of some production practices, these three feedlots were certified by the USDA-FSIS as Verified Production Control feedlots. The knowledge gained during those three years now serves as the backbone for the National Cattlemen's Association (NCA) BQA program for feedlots. BQA programs have been developed in 48 states.

Overcoming Barriers

The two most common concerns cattlemen have about getting involved in the Beef Quality Assurance program are uncovering a problem they would rather not deal with and the additional work or expense they might incur.

The Beef Quality Assurance program has shown that cattlemen produce a good product and are good stewards. The problems the program uncovered have typically been easy and inexpensive to solve. In every case, fixing the problems improved the long-term production goals of the cattlemen. For example, treated animals must be individually identified. This provided improved assessment of treatment response, allowing the cattleman to get better value from their treatment protocol. Experience has also shown that a Beef Quality Assurance program can save the cattleman money and employees time by identifying and avoiding potential production problems.

Important Points to Remember

1. Cattlemen cannot foresee every potential problem in their operations. One problem area at a time must be identified, then a plan should be developed and implemented for ensuring quality in that area of production. The experience will make it easier to develop quality assurance in other areas

of the operation.

2. Cattle will be free of violative residues and defects if cattlemen start with animals and feed ingredients that are free of violative residues and defects, and follow the rules for using the modern production tools selected.
3. There are a number of safeguards built into cattle production which helps the beef industry avoid quality defects. The safeguards include the handling of animals on an individual basis, the length of time required to produce a finished product, great diversity in sources of cattle and feed ingredients, and the quality control built into modern technologies of beef production.
4. Feedlot employees and managers must be committed to following the rules of proper beef production and must properly use modern production technologies. Every feedlot employee must be trained to know, understand, and identify areas where possible contamination with violative residues or quality defects may occur. Anyone who supplies services, commodities, or products to a feedlot must understand the quality assurance objectives of the feedlot.
5. Cattlemen must be able to document all the steps of production. Good production records allow documentation, analysis of production, and improved financial decisions.
6. Critical points in production must be monitored to ensure no residue violations or carcass defects occur. The critical points include incoming cattle, products, and commodities; handling of cattle, products, and commodities; and evaluation of outgoing cattle.
7. Some production areas have higher residue and carcass defect risks than others. High risk production areas include non-performing cattle, large single source feed ingredients, and brokers of non-standard supplies. Non-standard supplies include by-product feed ingredients and multiple source cattle.
8. Cattlemen must be able to monitor beef production to ensure it is free of violative residues and carcass defects.

Getting Started

Employees and managers must be sold on the reasons for working with a BQA program. Getting started requires three meetings.

The first meeting should provide general information to everyone in the operation. Every employee should be asked to help identify potential residue and carcass defect risk areas.

The second meeting should be informal and include people from different areas of the feedlot. Potential risks to quality in their area should be discussed and ideas should be developed for dealing with the risks identified. A plan should be developed to implement residue and carcass defect control measures in each area of the feedlot. These plans must meet the needs of the employees, as well as management, and fit the routine work flow.

The third meeting should also be informal. Review the plan, make any changes identified by the people in the areas, and get started.

Failure of BQA programs during the early stages of development are most often caused by someone in management being reluctant to make a commitment to BQA, or the BQA plan does not consider the needs and problems of employees.

BQA Road Map

Hazard Analysis Critical Control Points (HACCP):

A good starting place in taking a close look at what could go wrong (Hazard Analysis), and building in

practices that allow cattlemen to check or verify that these problems did not happen (Critical Control Points). Design all the everyday working techniques to avoid having anything go wrong in the first place.

Problems in beef production have the domino effect. It is not hard to correct a problem with quality or production, but as more production problems continue to occur, defects in performance and quality will be noticed. Defects include injection site damage, residues, poor feed conversions, lowered daily gains, and inconsistent packer yields and grade.

Start With The Basics

Animal performance can be optimized only if the people managing the animal respect the animal, themselves, and the people they work with. Cattle that are treated with patience and tender loving care are less likely to get sick or perform poorly.

Animal handling techniques can be the pivotal points for animal stress. Stress leads to performance problems which leads to quality defects. Regardless of experience, every feedlot employee can benefit from a review of cattle psychology.

BQA is everyone's job; there are no "most valuable players." Everyone needs to watch for mistakes and take every opportunity to recheck the production techniques used. Finding ways to lower animal stress and improve the application of production techniques is everyone's responsibility.

Specific Control Areas

General: All suppliers must know the feedlot has a BQA program and the quality of service they offer will be included in BQA monitoring. Record all lot and serial numbers for products received. Retain samples of all products that do not have lot or serial numbers, including feedstuffs. Everyone who uses products with a potential residue hazard or carcass defect risk must be trained in the proper use of the products. Training should include proper disposal of product remnants.

Animals: Antibiotics and agri-chemicals are the two residue risks to consider, but it is impractical and not economically feasible to test every animal that enters the feedlot. Most cattle will spend over four months in a feedlot, which far exceeds the withdrawal time for all but two classes of compounds: long half-life organophosphates and aminoglycoside antibiotics. Animals that are potential residue risks for these compounds are often poor performers in a feedlot. Poor performing cattle are often sold before the routine sale of their pen mates. The antibiotic residue risk far exceeds the risk of organophosphate residues. Screening poor performers prior to sale for antibiotics is an important control point.

Not using intramuscular (IM) injections will eliminate injection site damage to edible tissue. Never give IM injections in the rump and round muscles. Never give more medication per site than recommended by the manufacturer.

Periodically review and monitor proper cattle handling techniques.

Medications: Follow all label directions and use only government approved products. Identify treated cattle with individual identification ear tags. Keep records for products used and check them to ensure that all cattle have met the prescribed withdrawal times before releasing them from the feedlot. For injectable products, never use a larger needle than necessary and change needles frequently. Keep a map of injection sites that identifies the location where each product was used and the person giving the

injection.

"Extra Label Drug Use" (ELDU) refers to the use of a product in a manner other than as directed by the product label. This includes changing the dosage, route of administration or duration of product usage. ELDU is approved only in cases in which the disease will not respond to approved label recommendations, the animal is individually identified, treatment records are maintained, and if the treatment is under the supervision of a veterinarian. The potential for residues can increase in this situation and the withdrawal time for the product must be extended; however, the length of the withdrawal time needed to ensure that no violative residues remain in the animal is very difficult to establish. Random screening and assigning a prolonged withdrawal time should be done by the cattleman's veterinarian for all cattle that fall in the ELDU category.

Non-performing cattle and cattle sold before the normal sale of their pen mates should be screened for antibiotic residues before they are released from the feedlot. If there is a question about medications for which screening tests are not available, the packing house inspector should be advised of the cattle's medication history so additional testing can be performed if required. Sending cattle to a packing house "subject to test and inspection" will not generally cause the feedlot or the packing house a problem. It is important to make arrangements with the veterinary medical officer at the packing house before requesting animals be processed "subject to test and inspection."

The medication use records must be checked for all cattle before they are released from the feedlot.

Feed: Cattle are exposed to a single source of feed for only a short time due to the diversity of grain supply at most feedlots. Short duration exposure does not pose a high residue risk to feedlot cattle.

Feedstuffs such as fats, and other low volume usage feed ingredients do pose a potential hazard. These products may contain concentrated contaminants or may be a single source if fed over a long period of time. For fats, the risk can be minimized by feeding tallow, which is monitored for contamination by the government. A sample from each shipment of such feeds should be retained for possible future testing.

Feed processing, mixing and delivery: Quality assurance in these areas affects daily cattle performance. Care must be taken to ensure feed ingredients are not contaminated during processing. Following mixing and delivery specifications will ensure feed and feeding consistency. Developing a daily evaluation of feed mixing and feed delivery will ensure that specifications are being met.

Feed medications: Following the rules and keeping accurate records of feed medication usage will avoid all residue risks. Feed medication usage should be audited daily. Feed medication use records must be checked to verify that the proper withdrawal time has been met for each animal, or group of animals, before being released for sale.

Pesticides: Using only government approved pesticides and following the label directions will avoid a pesticide residue problem. Pesticides must be stored properly and accurate records kept of their use. Employee training is critical for safe proper use of pesticides.

Feedlot maintenance and repair: It is very important to include the employees who work with maintenance and repair in the beef quality assurance program. These employees are critical to error-free cattle feeding.

Incorporate BQA with other management objectives: Incorporate BQA as part of a total quality management plan that includes employee safety and environmental control.

Monitoring BQA Production

Ask each person responsible for an area of cattle handling, feeding, or treatment to document and initial their work. The crew foreman should verify each member's work activity. Get the office employees involved in monitoring inventories, invoices, and records. Monitor cattle and their records to ensure the BQA plan is being followed. Periodically, monitor carcasses at a packing house for bruising, injection sites, and subclinical disease.

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