

# Implementation of a beef cattle welfare and quality assurance assessment tool in commercial cattle feeding operations in Kansas.

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#### Introduction

Consumer interest in production agriculture has prompted the beef industry to develop tools to increase the accountability and transparency of management practices within the industry. Recently, the development of an on farm assessment tool was developed by the Beef Quality Assurance program. The purpose of this project was to demonstrate the implementation of an industry-oriented animal welfare assessment, while recording data to observe and baseline current practices and documentation within the commercial cattle feeding industry as well as potentially identify necessary areas of improvement.

### Materials and Methods

An assessment tool developed by veterinarians, animal scientists, and beef production specialists was used to objectively evaluate key areas of beef cattle production such as animal handling, antibiotic residue avoidance, cattle comfort, and food safety in 56 commercial feedyards located across Kansas. The average one-time animal feeding capacity was 35,455 animals, with a range of 3,000 to 135,000 animals. The participating feedyards have the capacity to provide feed and care for a total of 1,985,500 animals at one time, which represents roughly 85% of the entire one-time cattle feeding capacity of all feedyards in the state of Kansas.

Trained Kansas State University personnel in collaboration with practicing beef industry veterinarians worked with participant feedyard personnel to complete the assessments. During the assessment, the following areas of animal management were evaluated and assessed: documentation of 18 different best management practices (Table 1.), animal housing, care, and processing facilities, and cattle handling practices. Ten randomly selected pens within each feedyard were inspected for cattle comfort, water tank cleanliness, and feed quality; a minimum of 7 acceptable pens out of 10 was required to pass.

To evaluate animal handling, processing procedures were observed on a minimum of 100 cattle within each feedyard operation. Evaluation of animal handling included usage of driving aides on cattle, prevalence of cattle falling, tripping, vocalization prior to the application of a procedure, jumping, and accuracy of cattle restraint. The prevalence rates were compared to the maximum acceptable percentages set forth in the assessment tool, which are listed below in the results section of this report.



### Results

All feedyards that participated in the assessment process were found to exceed acceptable levels for facilities and cattle comfort. On average 98% of inspected pens had acceptable animal stocking density, mud scores, and feed bunk evaluation. Cleanliness of water tanks was acceptable in 83% of all pens inspected. The most common water tank issue was the presence of excessive algae or debris accumulation (Figure 1). All feedyards assessed were found to possess a documented valid veterinary-client-patient-relationship.

Cattle handling procedure assessment finding are illustrated in Figure 2. Across all cattle observed during processing, a driving aide was used on 3.98% of the cattle (maximum acceptable = 10% usage rate), 0.2% of cattle fell while exiting the chute (maximum acceptable = 5%); 1.8% of cattle tripped while exiting the chute (maximum acceptable = 10%); 0.9% of cattle vocalized while in the chute before a procedure was performed (maximum acceptable = 5%); 5.9% of cattle jumped and ran when exiting the chute (maximum acceptable = 25%); and 0.2% of cattle were improperly restrained before processing (maximum acceptable = 0%).

Nineteen of the 56 participating feedyards (34%) maintained complete and current documentation of the 18 best management practices (BMP) required by the assessment (Figure 3). The percentage of large feedyards ( $\geq 20,000$  head capacity) with complete BMP documentation exceeded the percentage for small feedyards (42% vs. 18%, respectively).

## Conclusions

This is the first study of its kind, looking into production practices across the commercial cattle feeding industry and comparing actual practices to an objective standard. Commercial feedyards in Kansas do an excellent job in maintaining cattle comfort and cattle handling. However, this benchmark exercise indicates that most commercial cattle feeding operations need to develop and document best management practices for their operation through consultation of their veterinarian, nutritionist and industry specialist.

Implementation of this assessment tool is valuable for internal assessment of cattle care quality associated with wholesome, safe beef production within the individual cattle feeding operations. This assessment tool will also serve as an excellent external assessment to maintain consumer confidence in how the beef industry strives for consistent improvement in food safety and cattle health and well-being.

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**Table 1.** The 18 Best Management Practices assessed for existence of documentation in 56 commercial Kansas feedyards.

- 1. Drug residue avoidance protocols
- 2. Medication and biological records
- 3. Veterinary-client-patient relationship validation
- 4. Emergency action plans for inclement weather
- 5. Needle management and disposal plan
- 6. Cattle shipment records
- 7. Pen management/maintenance plan
- 8. Euthanasia protocol and training documentation
- 9. Feed supplement records
- 10. Feed medication records
- 11. Feed quality assurance records
- 12. Personnel training documentation
- 13. Non-ambulatory cattle management
- 14. Cattle processing records and injection site maps
- 15. Feed delivery records
- 16. Mortality disposal documentation
- 17. Biosecurity and security plan and documentation
- 18. Individual animal health records



**Figure 1.** Percentage of the 56 participating Kansas feedyards (large feedyards  $\geq$  20,000 animals; small feedyards < 20,000 animals) which had acceptable scores for facilities assessment.





**Figure 2.** Percentage of cattle observed during processing (minimum of 100 animals within each feedyard) requiring use of driving aides, falling, tripping, vocalizing, jumping, or which were improperly restrained for 56 commercial feedyards in Kansas (large feedyards  $\geq$  20,000 animals; small feedyards < 20,000 animals)





**Figure 3.** Percentage of Large ( $\geq$  20,000 animal capacity) and Small (< 20,000 animal capacity) feedyards in Kansas which had complete documentation of the 18 Best Management Practices required by the assessment tool.

