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Making BRD DOA as a cattle industry concern

STILLWATER, Okla. – A multi-disciplinary team of Oklahoma State University scientists and practitioners is riding herd on one of the most challenging concerns of Oklahoma’s \$4.6 billion cattle industry: Bovine Respiratory Disease.

BRD is the most common disease among feedlot cattle in the United States, accounting for approximately 75 percent of feedlot morbidity and 50 percent to 70 percent of all feedlot deaths. BRD causes between \$800 million to \$900 million annually in economic losses from death, reduced feed efficiency and antimicrobial treatment costs.

“Immune response and morbidity issues relative to cattle growth and carcass quality affect every level of the beef industry, from the producer to the packer, all the way to the consumer as end-user,” said lead-investigator Clint Krehbiel, holder of the university’s Dennis and Marta White Endowed Chair in Animal Science.

A relatively recent development of research conducted by Krehbiel and his collaborators shows cattle that have three or more bouts of disease produce lower-quality meat.

“As the number of antimicrobial treatments increased, average daily gain in the background phase decreased, cost-per-unit increased and net returns declined,” Krehbiel said. “Moreover, marbling scores, color stability and overall acceptance of the final beef product by consumers decreased as the number of antimicrobial treatments increased.”

In other words, health issues on the farm or at the feedlot can have a direct relationship on the product purchased in the store. Everybody in the food chain loses dollar value.

OSU researchers have discovered that days on feed needed to reach a common 12th rib fat thickness increased by seven days for every unit increase in antimicrobial treatment required.

“Increased days on feed, lower final body weight and lower carcass value resulted in an \$11.36 loss in income for every time an animal was treated,” Krehbiel said. “Therefore, decreasing the average number of times an animal is treated for BRD by one treatment would result in a nearly \$9 million savings to Oklahoma feedlot cattle producers.”

Few studies have documented the economic effect of BRD from incidence of the disease through harvest, and especially the impact of BRD on acceptability of the final product as determined by consumers.

“Demand for higher-quality products and an increase in value-based marketing highlight the importance of research aimed at increasing beef producers’ awareness of health management practices that have the potential to increase profitability and beef product quality,” said Ron Kensing, head of OSU’s department of animal science.

Kensing added the research is representative of the importance OSU’s Division of Agricultural Sciences and Natural Resources places on its land-grant mission to provide science-based solutions to concerns and issues vital to enhancing the quality of life for people throughout Oklahoma and the region.

“Many of our complex problems in animal agriculture today require interdisciplinary teams to develop creative solutions,” he said. “Clint is a great collaborator. The research efforts he leads compliment other research and extension efforts in the department to optimize use of forage by cattle, improve reproduction efficiency, advance quality assurance programs and other projects that are meant to help Oklahoma beef producers maximize their profit potential in sustainable ways.”

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