

Management Practices Associated with Veterinary Consultation among Beef Cattle Producers

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Introduction

Bovine practitioners provide management advice and education to cattle producers. As of 2008, Tennessee ranks ninth in the US in beef cow inventory. We conducted a mail-out survey to compare knowledge, attitudes, and practices related to beef cattle management and antimicrobial use among Tennessee beef cattle producers. The role of veterinary consultation was assessed.

Materials and Methods

Data were collected as part of a Tennessee Team on Antimicrobial Resistance (TTAR) mail-out survey distributed by USDA National Agricultural Statistics Service (NASS). TTAR is a coalition including members from the Tennessee Department of Health, Tennessee Department of Agriculture, University of Tennessee (UT) College of Veterinary Medicine, Tennessee Veterinary Medical Association, UT Extension Service and the Tennessee Cattlemen's Association. In November 2007, surveys were mailed to a stratified random sample of 3,000 Tennessee beef producers, with a second mailing for nonrespondents in February 2008. The data collection period for responses was November 1, 2007–April 11, 2008. Producers were asked about veterinary consultation for sick cattle, biosecurity, antimicrobial use and record-keeping practices, and interests related to agricultural education. Odds ratios were calculated to determine association of veterinary consultation with certain management practices.

Results

One thousand, forty-two (35%) of 3,000 producers responded. Of those with cattle (82%), 76% were cow-calf

only, 20% had multiple operation types (cow-calf plus either backgrounder or feeder) and 3% of operations were backgrounders or feeders without a cow-calf component. Three-quarters of producers with cattle indicated that they consulted with a veterinarian for either pneumonia or diarrhea. Producers who consulted with a veterinarian for pneumonia or diarrhea were more likely to test for diseases before admitting new animals to the herd (OR = 1.9, CI: 1.3-2.9), quarantine new purchases (OR = 1.4, CI: 1.1-1.9) and separate sick cows from healthy cows (OR = 2.2, CI: 1.5-3.1). These producers were also more likely to use written instructions for treating disease (OR = 1.6, CI: 1.1-2.2), keep records of antimicrobial purchases (OR = 1.5, CI: 1.2-2.0) and antimicrobial use (OR = 1.6, CI: 1.2-2.2), and to observe withdrawal times (OR = 1.6, CI: 1.1-2.3). There were no differences in producers' interest in cattle health education programs, use of mass antimicrobial treatment, use of antimicrobials as growth promoters, treatment with antimicrobials at doses higher than the label instructs, or likelihood of antimicrobial use between producers who consulted a veterinarian for respiratory disease or diarrhea and those who did not.

Significance

Tennessee beef cattle producers who consult with a veterinarian are more likely to be in compliance with or knowledgeable of certain best management practices, including practices related to judicious use of antimicrobials. In Tennessee, three-quarters of beef operations are cow-calf only. These results can be useful in tailoring client education efforts. Additionally, a valid veterinary client-patient relationship should be emphasized in promoting judicious use of antimicrobials and other practices enhancing beef production.