What can Veterinarians and Producers do to Improve Biosecurity Practices on US Dairy Operations?

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Introduction

Implementation of biosecurity and biocontainment practices continues to be the best means by which to identify and decrease the spread of many diseases. Results from the National Animal Health Monitoring System's (NAHMS) dairy studies allow for a comparison of biosecurity practices implemented on dairy operations from 1991 to 2007. Results from the most recent study in 2007 indicate that numerous opportunities remain for veterinarians to assist dairy producers in improving biosecurity and limiting disease introduction and spread on operations.

Materials and Methods

NAHMS Dairy 2007 included 2,194 dairy operations in 17 dairy states representing 79.5% of US dairy operations and 82.5% of US dairy cows. An objective for the study was to describe biosecurity practices and determine producer motivation for implementing or not implementing biosecurity practices. Survey questions from previous NAHMS dairy studies in 1991, 1996 and 2002 were used to evaluate changes in practices over time. Statistical software which accounted for the complex study design was used to provide estimates that are reflective of the population of dairy producers from which the participating producers were selected.

Results

A lower percentage of operations (38.9%) brought any cattle onto their operation in 2007 compared to 53.3% in 1991. Bred heifers, lactating cows and bulls were the most frequent new additions in all four study years. Fewer operations required any vaccinations for new additions prior to bringing animals onto the operation in 2007 compared to 1996 (47.2% and 62.3%, respectively). Similarly, in 2007, fewer operations performed any testing of individual animals brought onto the operation (23.3%) compared to 33.7% in 1996. Approximately 25% of operations that purchased cattle and didn't require any individual animal testing reported that the diseases were not a concern to their operation. Between 5.7 and 7.7% of producers who brought cattle onto the operation and didn't require individual animal testing reported that testing was not recommended by their veterinarian. The percent of operations evaluating udder health by bulk tank milk cultures from the source operation increased from 5.8% in 1996 to 13.0% in 2007. Additionally, it was reported in 2007 that approximately one in four operations that brought cattle onto the operation during the previous year (28.7%) required any herd of origin information. Annual cow mortality was reported at 3.8% in 1996, 4.8% in 2002 and 5.7% in 2007. During these years, between 14.8% and 19.8% of deaths were due to unknown reasons. Producers reported in 2007 that 13.0% of operations performed necropsies and only 4.4% of dead cows were necropsied during the previous year.

Significance

Many opportunities exist for dairy practitioners to assist producers in preventing disease introduction and evaluating disease spread on dairy operations. Veterinarians can assist producers in developing optimum protocols, which may include testing and vaccination to lower the risk of disease introduction. Additionally, veterinarians can recommend plans to more closely evaluate diseases responsible for cow deaths.