Feedlot Case Study

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A feedyard was followed that utilized manual lung scoring for treatment protocol decisions. From the summer of 2012 through the summer of 2014, this feedyard randomly utilized either Whisper scoring or manual lung scoring for treatment protocol decisions on an animal-by-animal basis. All data and outcomes were captured from the feedyard’s animal health system database.1

The goal of this study was to determine if there were any differences in outcomes based on the lung severity assessments of Whisper lung scores compared to manual lung scores.

Inclusion criteria for study:

• Pull diagnosis must be “respiratory”.
• If the animal died, death diagnosis must be “respiratory”.
• Only information from the first respiratory treatment would be considered.
• Death must have occurred within 30 days of the initial pull date. If more than 30 days lapsed between the pull date and the death date, the animal was excluded.

Products encountered:

• Processing vaccines: Express 3, Pyramid 3, Pyramid 5
• Metaphylaxis products: Draxxin, Micotil, Zactran, None
• Treatment products: A180, Baytril, Bio-Mycin, Draxxin, Excede, Excenel, Naxcel, Nuflor, Resflor Gold, Zactran

Methods

12,213 pulled animals met the inclusion criteria and were analyzed, controlling for the effects of processing vaccine, metaphylaxis, treatment product, and rectal temperature. Concomitant use of Whisper occurred during all months of the study. Analysis was able to account for different products used at treatment and processing as well as time of year.

1 Geissler Data Science, Geissler Corp., Minneapolis, MN
and rectal temperature at pull.

Results

• Overall feedyard pulled respiratory case fatality rate was 6.8%.
• The distribution of the 1,830 Whisper lung scores in this study matched the distribution of the Geissler Corporation sound library of Whisper scores at first treatment time.
• Respiratory pulled case fatality rate of manual lung scored animals was 7.03%.
• Respiratory pulled case fatality rate of Whisper lung scored animals was 5.52%.
• Whisper lung scored animals had a case fatality rate reduction of 21.5%. The analysis yielded a strong statistical result (p < 0.0263).
• Of the animals that died within 60 days of treatment, Whisper lung scored animals had a longer survival time compared to manual lung scored animals (18.3 days vs. 15.9 days).
• Had the feedyard used Whisper on all of its respiratory pulls, there would have been an estimated 157 fewer deads.

Conclusion

Analysis was able to account for different products used at treatment and processing which revealed an underlying difference in diagnostic accuracy based on response to treatment. In this study, Whisper lung scoring provided a more accurate assessment of lung status and therefore a more accurate diagnosis than manual lung scoring. The treatment protocol for BRD is most successful when applied to the correct BRD diagnosis.

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1 Data on file, Geissler Corporation, Minneapolis, MN