BBD-057

TISSUE SELECTION FROM DIFFERENT PARTS OF THE LUNG IS CRITICAL FOR DETECTION OF *MYCOPLASMA HYOPNEUMONIAE*

A. Pausenberger [1], H. Nienhoff [2], N. Bornemann [3], K. Strutzberg-Minder [3].

[1] MSD Animal Health, Haar, Germany; [2] Landwirtschaftskammer Niedersachsen, Hannover, Germany; [3] IVD GmbH, Seelze-Letter, Germany.

Introduction

Mycoplasma hyopneumoniae (M.hyo) detection in a lung tissue sample is part of respiratory disease diagnostics. Different authors have quantified *M.hyo* in order to connect *M.hyo* load with lung lesion severity. Quantification was performed on small pieces of lung tissue and, as expected, concentration of pathogens varies depending on the location of the sample. This study compared *M. hyo* load of various samples from one side of the lung.

Material & Methods

At a German abattoir, 20 lungs of unknown origin with typical macroscopic *M.hyo*-like lesions were selected. Lung lesions scores (LLS) of the right lungs were evaluated and four samples were taken from each of the right lungs:

- tissue sample from the tip of the right medium lobe (ML)
- tissue sample from the border between healthy tissue and lesion (GB)
- two samples from a homogenate of the complete right lung (Stom1 and Stom2)

Homogenization was done in the Stomacher® (Seward Ltd.; GB-Worthing, West-Sussex). Samples were examined by rPCR (Strait et al. 2006) at the IVD GmbH in Seelze-Letter, Germany.

Results

Cycle threshold (Ct-) values of the four samples were compared with each other and with the LLS. All Stom 1- and Stom 2 samples tested positive, 4 ML and 2 GB-samples tested negative. All Ct-values were in the same range. No correlation was found between Ct-values and LLS.

Discussion and Conclusion

A more realistic estimation of *M.hyo* load in a lung can be expected by testing a completely homogenized lung instead of small tissue samples; resulting in a reduced chance of false negative test results. Further investigations are necessary for a better understanding of correlations between LLS, *M.hyo* load, timepoints of infection and sampling, presence of other pathogens and different tissue samples.