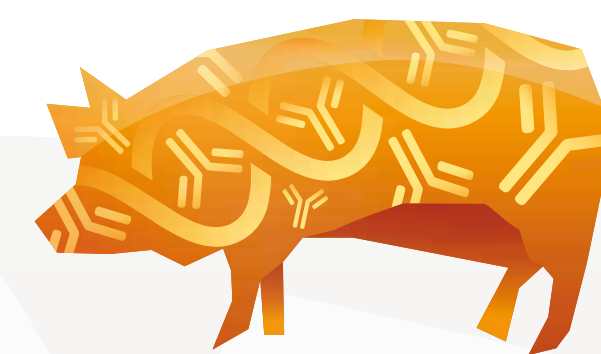


Can Lung Lesions Scoring Be Replaced by Monitoring M hyo antibodies?

Maartje Wilhelm¹, Eric van Esch¹, Alex Eggen²
 BioChek BV¹, Reeuwijk, the Netherlands; AEVC BV²



Introduction

Lung Lesion Scoring (LLS) is the method of choice for checking diseases like enzootic pneumoniae (EP) and for analyzing the effect of intervention schemes. However, LLS is a time consuming process that is not always practical. Furthermore, LLS in a slaughterhouse is not suitable for routine monitoring, and the interval between changes in the intervention scheme and performing a LLS evaluation of the same batch at slaughter is very long. Serological investigation is more practical for routine monitoring. Currently serological investigation for M hyopneumoniae (M hyo) has drawbacks, mainly the lack of understanding of the relationship between serology, pathology and epidemiology. When a correlation can be established between EP-LLS and serology (S/P ratio) this will have both practical and financial advantages

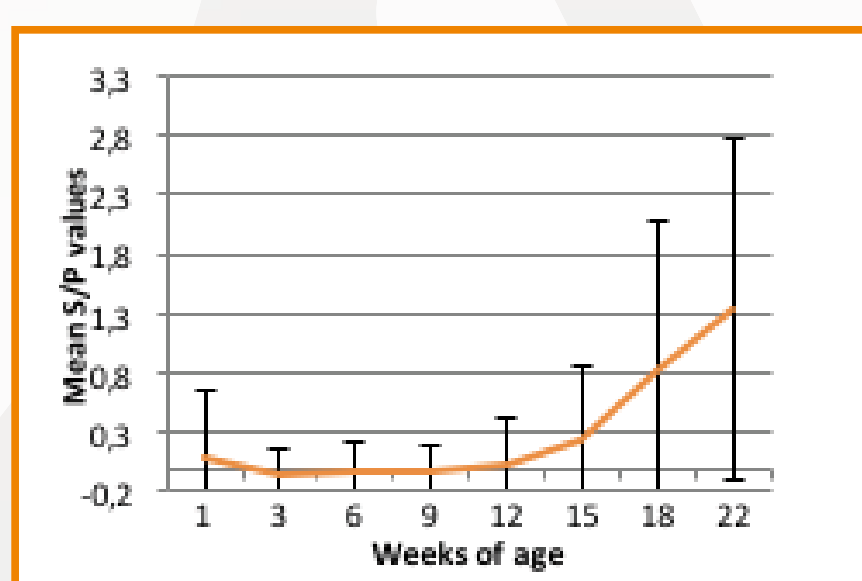
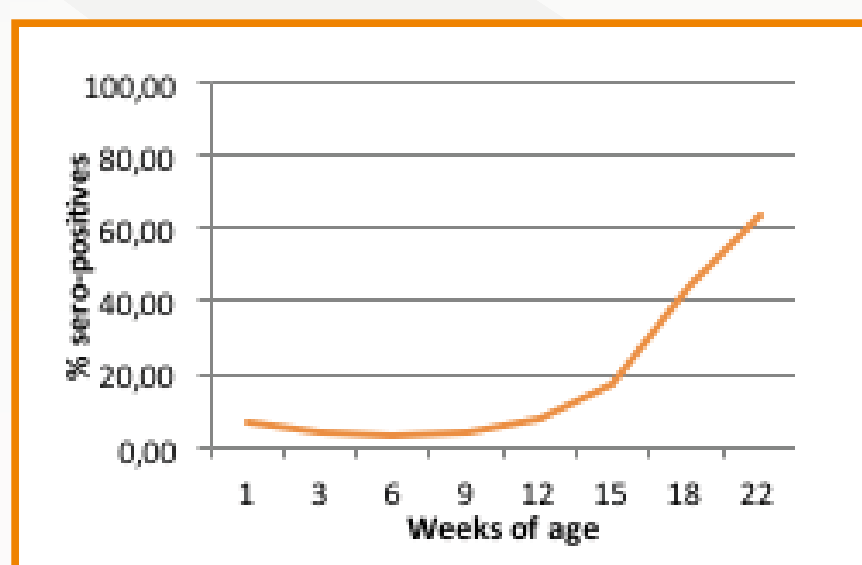
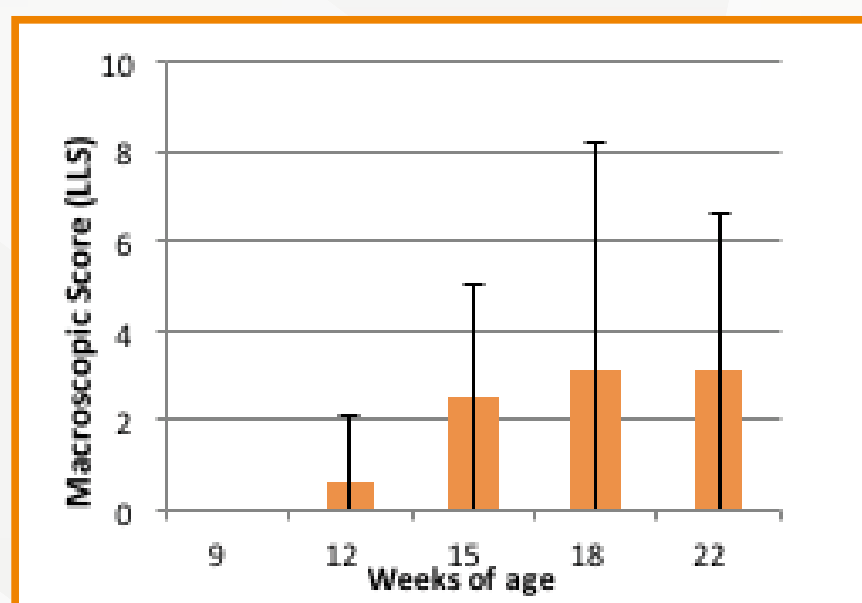
PCV2 Field Example

Materials and methods

In a chronological study 542 pigs were followed in time (1). The pigs were allocated to one of 3 groups. Two groups received Mhyo vaccines, the 3rd group, containing 184 pigs, was the negative control group. Only this negative control groups was used for the purpose of this paper. Every 3 weeks a number of pigs was necropsied, 66 in total, and macroscopic lung damage (LLS) was evaluated. Serum samples were collected and tested with the BioChek Mhyo ELISA test kit.

Results

In the negative control group a total of 66 pigs were necropsied. The correlation between LLS and serological results was $R=0,67$ ($P = 0.008$). The S/P ratio found at 18 weeks of age would explain 47% of the recorded LLS (2).



Conclusion

LLS is an much used method to monitor respiratory diseases including EP, but has practical and financial drawbacks. The BioChek M hyo ELISA is an economic and fast method to obtain information on the presence and level of antibodies. Routine serological monitoring is often practiced on swine farms. When monitoring includes M hyo, the resulting BioChek M hyo ELISA results will give an indication of the LLS in that batch of pigs. The higher the S/P ratio the higher the EP like LLS. In situations where a LLS evaluation is wanted, the BioChek Mhyo ELISA can help predict which batch of pigs has the highest chance of showing lungs lesions. Further investigations into the correlation will be required.

References

1. Sibila et al 2007
2. Segales et al; unpublished data