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(Missing) link between different boar taint detection methods

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INTRODUCTION

Research on the management of boar taint is hampered by the lack of a gold standard for measuring boar taint. In our previous studies (Aluwé, 2009, 2010), boar taint reduction was evaluated by various detection methods: laboratory analysis of indole, skatole and androstenone concentrations in fat, expert panel scores of meat and fat samples, consumer panel scores of meat samples, and the hot iron method on neckfat.

This study presents the level of **boar taint prevalence** (n=237, 110 kg) and the **link between these various detection** methods according to principal component analysis and Pearson correlation coefficients (n=375).

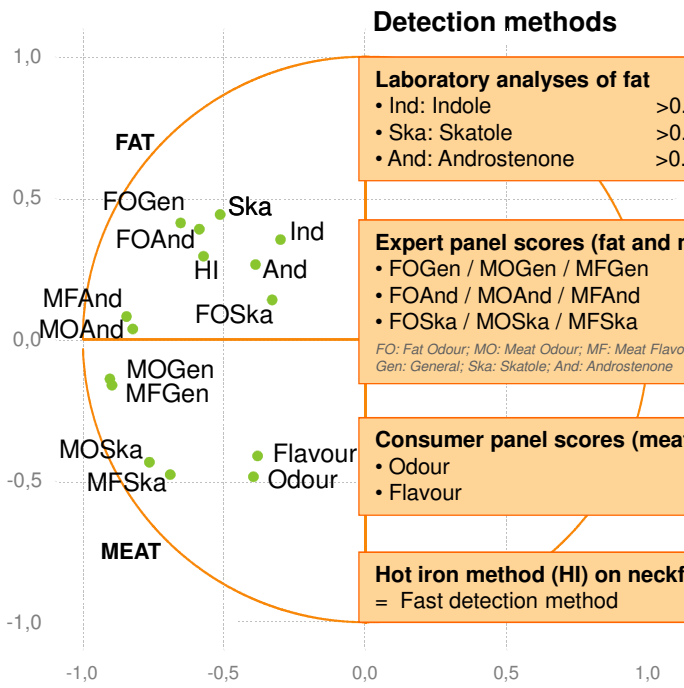
RESULTS AND DISCUSSION

BOAR TAINT DETECTION

Link between methods

PCA:
- All variables are strongly correlated with PC1
- **Distinction** between methods in **fat** and **meat**
- Strong link between odour and flavour evaluation of expert/consumer panel

Pearson correlations:
- **Low correlations** between methods (r<0.41)
- **Expert** panel scores of meat **best** correlated method with **consumer** panel scores (r=0.25)
- **Hot iron method best** correlated method with **expert** panel scores (r=0.41), and **lab analyses** (r=0.37), but **less** with **consumer scores** (r=0.11)



Principal component analysis (PCA): PC1: 41%, PC2: 11%

CONCLUSION

The hot iron method could be used as a fast screening method, as correlation with the laboratory analyses and the expert panel scores were moderate. However, the correlation found in this study between the detection methods are too low to advise one single detection method as a reliable boar taint detection method. More effort is needed to improve clarity in the boar taint problem.

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Aluwé, M. et al. (2009), Meat Sc. 82, 346-352Aluwé, M. et al. (2010), Meat Sc. submitted

This study was funded by the Federal Public of Health, Food Chain Safety and Environment (Contract R-BOARTAINT)