

Qualitative and quantitative animal behaviour measures in on-farm welfare assessments for pig herds

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Qualitative behaviour assessment (QBA) is a qualitative animal welfare indicator included in the WQ[®] animal welfare assessment protocols for cattle, swine and poultry. The WQ[®] protocols includes also quantitative welfare indicators for social behaviour. This study explores the potential association between QBA and the quantitative measures for social behaviour in slaughter pigs. During 2015-2016, four observers scored QBA and quantitative social behaviour – both as described in the WQ[®] protocol – for a total of 3,669 group housed slaughter pigs from 25 Danish slaughter pig herds. Quantitative social behaviour measures were edited to mean herd prevalences. Based on this, two variables on quantitative measures for social behaviour were included in the analyses – one on the positive (QUANPOS) and one on the negative (QUANNEG) interactions. Multiple Spearman rank correlations were used to evaluate the potential association between: (1) QUANNEG and the negative loaded WQ[®]-QBA terms: Fearful, Agitated, Frustrated, Bored, Irritable, Calmless, Apathetic and Distressed; and (2) QUANPOS and the positive loaded WQ[®]-QBA terms: Relaxed, Calm, Content, Friendly, Playful, Positively Occupied, Lively, Inquisitive, Sociable and Happy. Statistical significance level was set to $P < 0.001$. QUANNEG did – apart from one negative QBA-measure ‘Agitated’ (correlation coefficient -0.69, $P = 0.0001$) – not correlate to the negative QBA-measures, and QUANPOS did not correlate to any of the positive QBA-measures. The results indicate that quantitative and qualitative measures do not replace each other but rather supplement each other in an on-farm multidimensional welfare assessment.