NOT ANIMAL RELATED BUT HOUSING PARAMETERS DETERMINE AN EXPERT'S INTUITIVE WELFARE ASSESSMENT OF PIG FARMS

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On-farm welfare assessment systems usually involve checklists with pre-determined sets of parameters. The current study investigated whether these sets can be mathematically determined using an expert's assessment of welfare as reference. In this pilot study 31 finishing and 31 dry sow units were visited by three welfare researchers (out of a pool of five) acting as 'experts'. Independent from each other, the experts gave an intuitive welfare score on a scale ranging from 1 (poor) to 10 (excellent), five minutes after entering a pig room. They then recorded 45 animal and housing related parameters such as group size, skin damage and light intensity. Data were analysed after all farms were visited. Apart from one expert who scored consistently lower than the others, experts agreed strongly regarding their intuitive scores (REML-analysis, $P>0.05$). For each pig category a model search was performed to establish a multiple regression model for the welfare scores (averaged over experts). These scores for Sows were strongly related to the factors 'group housing' (6.23 vs 2.94 for Yes vs No; $P<0.05$), 'straw presence' (6.39 vs 4.83 for Yes vs No respectively; $P<0.05$) and 'protected feeding' (5.60 vs 4.75 for Yes vs No respectively; $P<0.05$). The linear model for Sow Welfare which included these three factors accounted for 89% (=R^2-adjusted) of the variance. The Finishing pig scores were related to 'presence of separate feeding and resting areas' (5.28 vs 4.09 for Yes vs No respectively; $P<0.05$), 'enrichment materials' (6.44 vs 4.05 for Yes vs No respectively; $P<0.05$) and 'light intensity' (4.86 vs 4.08 for High (>10 lux) vs Low (£10 lux); $P<0.05$). The resulting model accounted for 78% of the variance. This study suggests that a limited number of parameters may serve to explain welfare scores by welfare researchers. Furthermore, housing parameters appear more important than animal based parameters.