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Development of a list of terms in Brazilian Portuguese for the Qualitative Behaviour Assessment of broiler chickens

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Abstract

Qualitative Behaviour Assessment (QBA) is a methodological approach to assess the whole animal using terms to describe and quantify the emotionally expressive qualities of behaviour and identifying larger patterns of expressivity through multi-variate statistical integration. A key condition for the success of QBA is achieving a common understanding of the meaning of descriptive terms by raters. Based on this, our study aimed to develop a list of terms in Brazilian Portuguese for the QBA of broiler chickens (*Gallus gallus domesticus*), and to test this list by studying its inter- and intra-rater reliability. Fourteen experts participated in a workshop and developed a list of 25 QBA terms, and 40 undergraduates tested this list by scoring 18 video clips using a 125-mm visual analogue scale. Principal Component Analysis was used to analyse observers' scores. Principal Component (PC) 1 ranged from disturbed/frustrated to comfortable/lively, suggesting this PC may be interpreted in terms of emotional valence. PC2 ranged from calm/dull to agitated/active, suggesting this PC indicates the level of arousal/energy of the birds. Both PC1 and PC2 clip scores showed good inter- and intra-rater reliability. This study demonstrates the importance of producing QBA term lists bottom-up as opposed to merely translating pre-existing lists from the scientific literature. Results suggest the standardised Portuguese QBA term list developed in this study is reliable in assessing the expressive qualities of broiler behaviour; therefore, a next step is to test it on-farm with experienced raters and further refine it concerning terms related to poor welfare.

Keywords: animal-based indicator, animal welfare, behaviour, poultry, Qualitative Behavioural Assessment, Welfare Quality[®] protocol