Refinement of broiler chicken welfare outcomes using Delphi methodology

Ana Paula Oliveira Souza and Carla Forte Maiolino Molento
Federal University of Paraná, Animal Welfare Laboratory, Brazil; anapaulasouza@ufpr.br

Recent studies about broiler chicken welfare assessment suggest the need for refinement in some animal welfare indicators. This study aimed to refine three broiler chicken welfare indicators: bird cleanliness (BC), carcass scratches (CS), breast and abdomen contact dermatitis (CD). We built a questionnaire with pictures of birds with different levels of the target indicators to be classified as absent, low, moderate or severe. Following Delphi methodology, the questionnaire was sent to 146 experts invited for the first round (R1). In the second round (R2), 88 participants who answered R1 were asked about the relationship between feathering and BC; to quantify maximum accepted levels of CS according to age, depth and length of lesion; and, based on justification given in R1 for each level of CD, to select between two scales including erythema. Interquartile deviation was calculated to verify consensus among respondents. In R1, there was 56.8% (83/146) complete and relevant responses for BC, 56.1% (82/146) for CS and 55.5% (81/146) for CD. In R2, 73.5% (61/88) of specialists participated, 68.7% (57/88) completed the questionnaire. In R1, consensus was achieved for 8/10 pictures of BC, and in R2 results suggested the need to include feathering condition assessment during BC analysis. Considering CS, consensus was achieved for 5/8 pictures in R1. In R2, 98.2% (56/57) of respondents considered that old scratches must be assessed as animal welfare indicator. For CD, consensus was achieved in 2/10 pictures in R1, being them the extreme cases, absence and severe CD. Additionally, erythema was recognized as an unhealthy condition of the skin by 96.4% (80/83) of respondents in R1. In R2, 64.9% (37/57) of respondents chose a more detailed scale to assess CD. After R2, we built a visual and descriptive scale for the assessment of BC and CD on farm, and CS at the slaughterhouse.