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Evaluation of the Danish surveillance of footpad lesions in organic and conventional broilers

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BACKGROUND

Footpad dermatitis (FPD) as an indicator of on-farm broiler welfare — Danish official surveillance system since 2002 with payment and enforcement implications. As originally developed for conventional broilers, the usability for organic broilers has not yet been investigated.

OBJECTIVES

Evaluation of performance of the official Danish FPD surveillance system with respect to potential sources of misclassification and the effect of the sampling strategy in both organic and conventional broiler feet.

MATERIALS & METHODS

Comparison of official FPD scores of 1,799 broiler feet (~100 per flock, from 9 organic and 9 conventional flocks) and scores by a laboratory reference method, based on predefined visual and invasive scoring criteria derived from the official system.

RESULTS

Wide range of severity.

Differences between organic and conventional broiler feet:
- Shape, colour and skin quality — less characteristic lesions in organic feet.
- Higher degree of hyperkeratosi and hypertrophy of papillae in organic feet.
An association between lesion size and depth was observed.

Marked differences between official and laboratory scores:
- Disagreement highly restricted to scores 1 and 2 — evidence of underestimation of lesion severity in organic and conventional feet.
- Disagreement more pronounced in organic feet compared to conventional, which was attributed to the organic lesions being more difficult to score.

Evidence of some degree of selection bias, especially in flocks with middle range flock scores, possibly due to insufficient randomisation.

Focus for future improvements to FPD surveillance systems:

- Objective: Objective criteria to minimise room for interpretation by describing the full range of lesion severity.
- Randomisation: Sampling of feet for scoring needs to be representative of the flock.
- Feasibility: Criteria needs to be feasible to evaluate under time constraints in commercial conditions.

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