Validation of on-line slaughter checks as a pig welfare diagnostic tool

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Method

Data were collected between May 2013 and December 2014 from ten batches of pigs (N = 720) reared in conventional intensive housing. 50% of the tail length was docked within 24 hours of birth. Each animal was assessed at 7, 9 and 10 weeks of age (early life), and at 15 and 20 weeks of age (later life). At each timepoint pigs were assessed for:

Tail lesions (TL)
Skin lesions (SL)
Health issues (HI)

Tail lesions were scored using a 5 point scale (adapted from Kritas and Morrison, 2007) that ranged from 0 - “no evidence of tail biting” to 5 - “total loss of tail”. Skin lesions were scored using a 5 point scale (adapted from Conte et al., 2012) that ranged from 0 - “no injuries” to 5 - “many very big, deep and red lesions covering the skin area”. Health issues (HI) which were recorded at each timepoint included lameness, burstus, coughing, scurrying, rectal prolapse, hernias and aural hematomas. Following slaughter at 21 weeks, each carcass was then scored for tail length (long ≥ 6cm, short ≤ 5cm), tail lesions, loin bruising and fresh (red) and old (non-red) skin lesions. Levels of carcass condemnation were also recorded. Using a one-way Kruskal-Wallis ANOVA, the carcass measures of pigs with tail lesions, skin lesions and health issues in ‘early life’ (present at least once at 7 and 9 weeks only), ‘later life’ (present at least once in 10, 15 and 20 weeks only) or ‘whole life’ (present at least once in both early and later life) were compared to their respective controls (C).

Results

Pigs recorded as having tail lesions in early life (P < 0.05), later life (P < 0.001) or during whole life (P < 0.001) had more carcass tail lesions than respective controls (Figure 1). Pigs recorded as having tail lesions in later life (P < 0.001) and during whole life (P < 0.001), but not during early life, had shorter tails on the carcass than C pigs. Pigs recorded as having skin lesions in early life, later life (P<0.05) and during whole life (P < 0.001) had significantly more healed (non-red) carcass skin lesions than C pigs (Figure 2). Fresh (red) skin lesions to the carcass did not differ between the welfare groups. Levels of loin bruising on the carcass did not differ between any of the experimental groups (P > 0.05). In addition, health issues recorded during any stage of life were not reflected in any carcass measures (P > 0.05).

Acknowledgements

Thanks to the Irish Department of Agriculture, Food and the Marine for funding this research.

References