Tail lesions on carcasses of Irish slaughter pigs in relation to producer association with advisory services

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Main findings

The high prevalence of moderate tail lesions in a large proportion of batches of slaughter pigs suggests that chronic tail manipulation is a widespread problem. The large variation between batches indicates that there is good scope for improvement in the housing and management of pigs to reduce this behaviour on Irish farms. Given the economic and welfare implications of even moderate tail lesions it would benefit producers to receive information from the factory on such lesions recorded during meat inspection. This could help inform farm management plans and enable intervention before the behaviour escalates into tail biting.

1. Introduction

Advisory services work to improve farm performance through better housing, management and nutrition of pigs. Record keeping is a vital part of such services but it is unclear how this relates to pig welfare issues such as tail biting. In general only severe tail damage is recorded at meat inspection such that the focus is on severe tail biting. However, in the absence of an acute outbreak of tail biting pigs can perform high levels of chronic tail directed behaviour (Taylor et al., 2010). It is likely that this results in a high prevalence of mild to moderate tail lesions which are also associated with pathologies, reduced carcass weight and increased risk of carcass condemnation/trimming (Harley et al., 2014).

2. Objectives

- Estimate the prevalence and variation between batches in tail lesions with different degrees of severity
- Investigate the effect of record keeping in association with advisory services on the prevalence of tail lesions

3. Methodology

- Abattoir observations in June/July 2014 for 3 – 4 days (9 am until finish)
- Abattoir A: 10,000 pigs/week; 4 pigs/min
- Abattoir B: 10,500 pigs/week; 6 pigs/min
- Scoring every pig after scalding/dehairing but before evisceration
- Two observers rotating every 1.5 hour

Measurements

- Sex
- Herd
- Tail lesions: none/mild (0,1), moderate (2), severe (3, 4,5)

![Figure 1. Tail lesion scoring system (scores 0–5, left to right)](image)

**Data analysis**


Tail lesions

- Moderate tail lesions: 25.2% of the pigs, 100% of the batches
- 26.8% of pigs per batch on average
- 47.9% of batches higher than average
- Severe tail lesions: 3.1% of the pigs, 76.7% of the batches
- 3.4% of pigs per batch on average
- 28.8% of batches higher than average
- Males have higher odds of moderate (OR = 1.4, 95% CI 1.25 – 1.49) and severe tail lesions (OR = 3.0, 95% CI 2.39 – 3.82) than females

![Figure 2. Prevalence of tail lesions and variation between batches](image)

Tail lesions are common and large variation between batches (especially in none/mild and moderate lesions) suggests that there is room for improvement

Tail lesions and record keeping

- 23 of the 61 farms sampled kept records
- Pigs from farms that kept records had lower odds of moderate tail lesions (OR = 0.5, 95% CI 0.33 – 0.85) but no differences were found for severe tail lesions

Questions arising......

- Does this reflect a true beneficial effect of record keeping on the management of pig health and welfare?
- Or are farms that keep records different in another respect (e.g. are they larger and/or with more labour units)?
- Is a high prevalence of tail lesions on a farm associated with poor performance indicators (e.g. days to sale, daily weight gain)?

Future research to establish relationship between prevalence of tail lesions with different degrees of severity and farm performance indicators in farms that keep records

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Table 1. Description of study population

<table>
<thead>
<tr>
<th></th>
<th>Factory A</th>
<th>Factory B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigs inspected (n)</td>
<td>5829</td>
<td>7304</td>
</tr>
<tr>
<td>Batches (n)</td>
<td>35</td>
<td>38</td>
</tr>
<tr>
<td>Farms (n)</td>
<td>27</td>
<td>35</td>
</tr>
</tbody>
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PIGWELFIND: ‘Pig Welfare Indicators’ (or ‘Finding Pigs Well’) is an acronym for the project entitled ‘Development of ante and post mortem meat inspection as a pig welfare diagnostic tool’ funded by the Research Stimulus Fund of the Irish Department of Agriculture, Food and the Marine under the National Development Plan (2007 – 2013)