Farmers’ point of view towards the applicability of a guideline to assess animal welfare of pigs

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Introduction

Legal obligation to record animal welfare indicators in Germany (TierSchG 2014)


Success of the tool depends on a high applicability and the farmers’ acceptance
KTBL guideline for fattening pigs

Animal welfare indicators:
- Daily weight gains
- Animal losses
- Slaughter Checks
- Treatment incidence with antibiotics
- Water supply
- Manure on body
- Tail, Ear and Skin lesions
- Evidence of ectoparasites
- Tail length
- Lameness
- Runts

For each indicator:
- Description with pictures
- Recording method
- Sample size of judged pigs
- Timing and frequency of recording and evaluation
Example - recording of the indicator `tail length´

- Frequency: recording for each stabiling and evaluation twice a year
- Sample size: all new pigs
- Scores:
  
  0 = Original length
  
  1 = > 2/3 of the original length
  
  2 = < 2/3 of the original length

- Result: \[
  \frac{\text{Amount of pigs with score 2}}{\text{Amount of pigs judged}} \times 100
  \]
  
  = Amount of short tails (%)
### Details of the KTBL guideline

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Timing and frequency of recording</th>
<th>Number of jugded growing pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tail length</td>
<td>each stabling</td>
<td>all new pigs</td>
</tr>
<tr>
<td>Animal losses</td>
<td>consecutively</td>
<td>all pigs</td>
</tr>
<tr>
<td>Treatment incidence antibiotics</td>
<td></td>
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<tr>
<td>Daily weight gains</td>
<td></td>
<td></td>
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<tr>
<td>Slaughter checks</td>
<td></td>
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<tr>
<td>Runts</td>
<td></td>
<td>Livestock &lt; 150 pigs:</td>
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<tr>
<td></td>
<td></td>
<td>all pigs</td>
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<tr>
<td></td>
<td></td>
<td>Livestock &gt; 150 pigs:</td>
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<tr>
<td></td>
<td></td>
<td>different suggestions for the</td>
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<tr>
<td></td>
<td></td>
<td>indicators (± 150 jugded pigs</td>
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<tr>
<td></td>
<td></td>
<td>proposed)</td>
</tr>
<tr>
<td>Manure on body</td>
<td>every six month to the middle</td>
<td></td>
</tr>
<tr>
<td>Skin, Ear and Tail lesions</td>
<td>of the summer and the winter</td>
<td></td>
</tr>
<tr>
<td>Evidence of ectoparasites</td>
<td>half-year</td>
<td></td>
</tr>
<tr>
<td>Lameness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water supply</td>
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<td></td>
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</tbody>
</table>
Materials and Methods

- Interviews with 20 fattening pig breeders
- Interview-guidline with 28 questions
- Farm visits for the collection of data consisting of two parts:
  1. Farmer records the KTBL indicators on their pigs
  2. Farmers’ opinion is recorded
- Transcription of the interviews
- Descriptive evaluation of the closed questions
- Qualitative Content Analysis by Mayring (2002) to evaluate the open questions
Results and Discussion – feasibility of the recording

- Water supply: 100% very difficult
- Ear lesions: 70% difficult, 30% very difficult
- Tail lesions: 80% difficult, 20% very difficult
- Lameness: 90% difficult, 10% very difficult
- Runts: 95% difficult, 5% very difficult
- Tail length: 80% difficult, 20% very difficult
- Evidence of ectoparasites: 90% difficult, 10% very difficult
- Manure on body: 75% difficult, 25% very difficult
- Skin lesions: 85% difficult, 15% very difficult

Percentage distribution of answers (n=20)
Results and Discussion – feasibility of the recording

Water supply

- Very easy: ≥ 80%
- Easy: ≥ 50%
- Fair: 0% to 49%
- Difficult: 0% to 49%
- Very difficult: 0% to 49%

Ear lesions

Tail lesions

Lameness

Runts

Tail length

Evidence of ectoparasites

Manure on body

Skin lesions

Percentage distribution of answers (n=20)
Results and Discussion – statement about animal welfare

- Water supply
- Lameness
- Evidence of ectoparasites
- Tail lesions
- Ear lesions
- Skin lesions
- Treatment incidence with antibiotics
- Daily weight gains
- Animal losses
- Runts
- Slaughter checks
- Manure on body
- Tail length

Percentage distribution of answers (n=20)
Results and Discussion – statement about animal welfare

- Water supply: Yes ≥ 80%
- Lameness: Yes ≥ 80%
- Evidence of ectoparasites: Yes ≥ 80%
- Tail lesions: Yes > 50%
- Ear lesions: Yes > 50%
- Skin lesions: Yes > 50%
- Treatment incidence with antibiotics: Yes ≥ 80%
- Daily weight gains: Yes ≥ 80%
- Animal losses: Yes > 50%
- Runts: Yes > 50%
- Slaughter checks: Yes > 50%
- Manure on body: Yes ≥ 80%
- Tail length: Yes < 50%

Percentage distribution of answers (n=20)
Results and Discussion – opinions about...

**Suggested sample size**
- 45% too high
- 40% adequate
- 15% too low
(n=20)

**Suggested frequency of recording**
- 65% too often
- 20% properly
- 15% too seldom
(n=20)
Results and Discussion – overall feasibility of the guideline

Number of entries (n=20)

Five-point scale

1 = very good
2 = good
3 = fair
4 = bad
5 = very bad

Ø 2.48 (n=20)
Conclusions

• Representativeness rather low
• Results are of high quality due to farm visits
• Summary after 20 interviewed farmers:
  – KTBL-Guideline is rated to be mostly practicable by the farmers
  – Most farmers are open minded towards the topic
  – Not all KTBL indicators fulfill the desired purpose for the pig breeders
  – The implementation is sometimes perceived as too complicated
  – There are concrete and plausible suggestions for improvement

→ Interviews are continued to raise sample size
Thank you for your attention!

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References


## Representativeness regarding animal welfare

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Most representative</th>
<th>Minor representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tail lesions</td>
<td>6</td>
<td>Manure on body</td>
</tr>
<tr>
<td>Runts</td>
<td>5</td>
<td>Tail length</td>
</tr>
<tr>
<td>Daily weight gains</td>
<td>4</td>
<td>Daily weight gains</td>
</tr>
<tr>
<td>Slaughter checks</td>
<td>3</td>
<td>Evidence of ectoparasites</td>
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<tr>
<td>Treatment incidence antibiotics</td>
<td>2</td>
<td>Skin lesions</td>
</tr>
<tr>
<td>Water supply</td>
<td>2</td>
<td>Runts</td>
</tr>
<tr>
<td>Animal losses</td>
<td>2</td>
<td>Lameness</td>
</tr>
<tr>
<td>Lameness</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ear lesions</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Evidence of ectoparasites</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Skin lesions</td>
<td>1</td>
<td></td>
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</tbody>
</table>

Multiple entries possible
Characteristics of the interviewed farmers

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fattening places</td>
<td>$\bar{\Omega} 1977 \pm 1426$</td>
</tr>
<tr>
<td>Workforce (AK)</td>
<td>$\bar{\Omega} 2.0 \pm 0.9$</td>
</tr>
<tr>
<td>Age of stable (years)</td>
<td>$\bar{\Omega} 12.6 \pm 7.3$</td>
</tr>
</tbody>
</table>

Group size:
- small (< 20 pigs)             | 9 farms       |
- tall (20-60 pigs)              | 8 farms       |
- mega (> 60 pigs)               | 3 farms       |

Origin:
- Lower Saxony                   | 3 farms       |
- North Rhine - Westphalia        | 17 farms      |