Breed and feeding effects on boar taint under organic conditions

H. Brandt¹, K. Höinghaus², R. Bussemas² and F. Weißmann²

¹Institut für Tierzucht und Haustiergenetik, Universität Giessen, Germany
²Thünen-Institut für Ökologischen Landbau, Trenthorst, Germany
2019 Ban of castration without anaesthesia

Alternative methods

- Castration with anaesthesia
- Sperm sexing
- Immunization against boar taint
- Fattening of entire males
Aim of the study

- Study breed effects on boar taint under organic conditions
- Study feeding effects on skatole content
- Study practical implementation of fattening of entire males under organic conditions
Dam breed
Large White x Landrace (DE x DL)

Sire breed
- Pietrain (Pi)
- Duroc (Du)

Feeding regime
- normal 100 % organic feeding (K)
- feeding supplemented with 10% native potato starch for the last 30 days of fattening (T)
## Results

### Significance of effects on boar taint

<table>
<thead>
<tr>
<th></th>
<th>Fixed effects</th>
<th>Interaktion</th>
<th>Covariable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Genotyp (G)</td>
<td>Feeding (F)</td>
<td>G*F</td>
</tr>
<tr>
<td>Androstenone</td>
<td>**</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Skatole</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Indol</td>
<td>ns</td>
<td>**</td>
<td>ns</td>
</tr>
</tbody>
</table>

** p < 0.01, * p < 0.05, ns not significant
Skatole for Genotype x Feeding

Skatole (µg·g⁻¹·fat)
### Androstenone and Indole (µg g⁻¹ fat) by Genotyp and Feeding

<table>
<thead>
<tr>
<th></th>
<th>Genotyp</th>
<th>Feeding</th>
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<tbody>
<tr>
<td></td>
<td>Duroc</td>
<td>Pietrain</td>
</tr>
<tr>
<td><strong>Number (n)</strong></td>
<td>138</td>
<td>142</td>
</tr>
<tr>
<td><strong>Androstenone</strong></td>
<td>0.92</td>
<td>0.68</td>
</tr>
<tr>
<td><strong>Indol</strong></td>
<td>0.0063</td>
<td>0.0051</td>
</tr>
</tbody>
</table>

significant differences
Skatole and Androstenone by Groups

- Skatole µg/g fat
- Androstenone µg/g fat

Legend:
- Ducoc K
- Duroc T
- Pietrain K
- Pietrain T

1% • 4% • 62% • 34%
Skatole, Androstenone and abattoir classification practical phase (n = 107 entire males)

Practical phase had to be stopped for economic reasons!
Conclusion

- higher daily gain for Duroc progeny
- higher lean meat percentage for Pietrain progeny
- feeding supplemented with 10% native potato starch for the last 30 days of fattening has a positive effect on skatole content only within Pietrain progeny
- in total very few integument lesion for all animals
- practical implementation of fattening of entire males impossible under existing regulations for abattoir classification