Mussel meal in diets to growing/finishing pigs - influence on performance and carcass quality

Wallenbeck, A¹, Neil, M.², Lundeheim, N¹ and Andersson, K².

¹Swedish University of Agricultural Sciences, Department of Animal Breeding and Genetics
²Swedish University of Agricultural Sciences, Department of Animal Nutrition and Management

Anna.Wallenbeck@slu.se

Funded by Core Organic
Background
Aim

Investigate how pig performance and carcass quality are influenced by dietary inclusion of mussel meal in diets to growing/finishing pigs of different genotypes.

Hypothesis: Pigs will perform in line with conventional feed, with maintained production results in terms of growth, feed efficiency, carcass quality, when mussel meal replaces conventional protein feed resources.
Material and methods

• Performed at SLU’s research herd
• Wet feed, according to SLU norm, with
  • ’conventional’ protein feed ingredients
  • 5% inclusion of mussel meal, 95 % conventional feed
• In total 64 growing/finishing pigs (25-110 kg)
  • Yorkshire x Hampshire or Yorkshire x Duroc, 1 genotype per pen
  • 4 pens/treatment, 4 pigs/pen, 2 production batches
• Balanced with regard to sex and birth litter
Material and methods

• Registrations:
  • Feed consumption
  • Growth (live weight development)
  • Feed conversion ratio
  • Carcass quality
    • slaughter weight, lean meat content
Statistical analyses

Analysis of variance using SAS procedure MIXED

\[ y = \text{treatment}^f + \text{breed combination}^f + \text{gender}^f + \text{treatment}^f \times \text{breed combination}^f + \text{pen}^r + e \]
## Results

<table>
<thead>
<tr>
<th></th>
<th>5% Mussel meal</th>
<th>Control diet</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily weight gain, g</td>
<td>956</td>
<td>948</td>
<td>0.832</td>
</tr>
<tr>
<td>Feed conversion ratio, MJ NE/kg growth</td>
<td>27.1</td>
<td>27.9</td>
<td>0.668</td>
</tr>
<tr>
<td>Lean meat content, %</td>
<td>58.8</td>
<td>58.2</td>
<td>0.349</td>
</tr>
<tr>
<td>Dressing percentage, %</td>
<td>78.1</td>
<td>78.6</td>
<td>0.460</td>
</tr>
<tr>
<td>Daily lean meat growth, g</td>
<td>457</td>
<td>451</td>
<td>0.674</td>
</tr>
</tbody>
</table>
Results

No significant difference between genotypes and no interactions between genotype and diet. 
$P>0.05$ for all traits
Conclusions

- Mussel meal can substitute conventional protein sources in growing/finishing pig diets with maintained production results

Thank you for your attention!

Anna.Wallenbeck@slu.se