The effect of sex and slaughter weight on carcass quality in pigs

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Introduction and objectives

Effect of slaughter weight and sex on carcass quality and profitability?

Low pig prices
High feed prices
Profitability of pig farming at stake
Immunocastrates
Rise of new management strategies male pigs
Boars
Experimental design

• 4 sexes
  • Boars
  • Barrows
  • Immunocastrates (IC)
  • Gilts

• 3 slaughter weights: 105, 117 and 130 kg

• Group pens

• Ad libitum feed

• 2 farms: different genetics, pen density and feed
Experimental design

• Weekly weighing
• Growth, feed intake, gain to feed ratio
• Slaughtered at the same slaughterhouse
• Carcasses classified using the AutoFom III Classification System
Statistical analysis

Farm had a significant effect on all parameters, but no interaction with sex and slaughter weight

No interaction between sex and slaughter weight
Results

Meat percentage

Slaughter weight: P=0.261

Sex: P<0.001
Results

Slaughter weight: $P=0.001$

Sex: $P<0.001$

<table>
<thead>
<tr>
<th>Sex/Precocity</th>
<th>Price/ kg carcass (euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>barrow</td>
<td>1.18</td>
</tr>
<tr>
<td>boar</td>
<td>1.20</td>
</tr>
<tr>
<td>gilt</td>
<td>1.30</td>
</tr>
<tr>
<td>ic</td>
<td>1.28</td>
</tr>
</tbody>
</table>
Results

**Slaughter weight:** $P < 0.001$

- **Price / carcass:**
  - 100, 105, 110, 115, 120, 125, 130

- **Prices:**
  - **a**
  - **b**
  - **c**

**Sex:** $P < 0.001$

- **Price / carcass:**
  - **ab**
  - **b**
  - **c**
  - **a**

ILVO
Results

Feed cost /pig

Slaughter weight: $P<0.001$

Sex: $P<0.001$

![Graph showing feed cost per pig with different letters indicating statistical differences.](Image)

![Graph showing feed cost per pig by sex with different letters indicating statistical differences.](Image)
Results

Sex: P<0.001

Gross margin /pig

Slaughter weight: P<0.001
Results

Gross margin/pig place/year: different results?

Duration of a production cycle = fattening duration + 5d waiting period

Production cycle per year = 365 days/ duration production cycle

Gross margin/pig place/year = gross margin/pig x production cycles/year
Results

Gross margin /pig place/year

Slaughter weight: P=0.385

Sex: P<0.001
Discussion and conclusion

Gross margin /pig place/year:
- no effect of slaughter weight
- barrows less gain compared to other sexes

• Careful interpretation is needed:
  pigs were slaughtered per pen at target slaughter weight
  in practice only 1 or 2 slaughter dates per production cycle
Thank you