Farmers’ expectations and experiences with alternatives for surgical castration

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Evaluation of farmers’ expectations and experiences

2009   Expectations

19 farmers perform 4 alternatives

2011   Experience

Same evaluation of alternatives in 2009 and 2011:

• Questionnaire with issue statements

• Ranking of the 5 treatments (control + 4 alternatives)
Evaluated alternatives

**Control**
- Routine castration practice

**Castration with CO$_2$-anaesthesia**
- Clinical trial, in cooperation with ZTC (Lovenjoel, Belgium)

**Castration with analgesia**
- Metacam® 10 to 15 minutes before castration

** Entire male pigs**
- Slaughtered at normal slaughter weight

**Immunocastration**
- Two vaccinations with Improvac®
Experimental set-up

- 19 farmers
- 120 male pigs/treatment
- Single sex rearing
- All 5 treatments in random order
Results

- 19 farmers
- 4 alternatives + control
- 2 time points (“before” and “after”)
- Issue statements and ranking of preference

- Time x alternative change of opinion due to experience (and time)
- Farmer different farmer, different preference

- Limitations for generalization
**Issue statement**
Totally disagree (1) to totally agree (7)

- MET
- CO2
- IMP
- EM

**Evaluated alternatives**
- Farmer
- Alternative
- Time
- Time x Farmer
- Time x Alternative

**P-value**
Easy to perform

Totally disagree (1) to totally agree (7)

Before: CO₂ < IMP, EM
After: MET < EM

P-value

<table>
<thead>
<tr>
<th>Alternative</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative</td>
<td>0.001</td>
</tr>
<tr>
<td>Time</td>
<td>0.564</td>
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<tr>
<td>Time x Alternative</td>
<td>0.049</td>
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</table>
Worthwhile performing
Totally disagree (1) to totally agree (7)

Before: CO₂ < IMP
After: CO₂ < EM

- MET
  - Before: ab
  - After: ab

- CO₂
  - Before: a
  - After: a

- IMP
  - Before: b
  - After: ab

- EM
  - Before: ab
  - After: b

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Better performance
Totally disagree (1) to totally agree (7)

Before: CO₂, MET < IMP, EM
After: MET ≤ CO₂ ≤ IMP < EM

P-value
- Alternative: <0.001
- Time: 0.114
- Time x Alternative: 0.002
Better consumer acceptance
Totally disagree (1) to totally agree (7)

Evaluated alternatives

- MET
- CO2
- IMP
- EM

Before
After

P-value

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<td>&lt;0.001</td>
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<td>0.068</td>
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<td>Time x Alternative</td>
<td>0.052</td>
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IMP < MET, EM, CO2
I don't want to perform

Totally disagree (1) to totally agree (7)

Before: IMP ≤ MET, EM ≤ CO₂
After: EM ≤ MET, IMP ≤ CO₂
Different farmer, different preference

Most preferred method (ranking 1)

Year | CONT | CO2 | MET | IMP | EM |
--- | --- | --- | --- | --- | ---
2009 | 6 | 10 | 7 | 5 | 0%
2011 | 7 | 1 | 3 | 1 | 7%
Different farmer, different preference

Least preferred method (ranking 5)

2009

<table>
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<tr>
<th>Year</th>
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<th>CO2</th>
<th>MET</th>
<th>IMP</th>
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<tbody>
<tr>
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<td>0</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>5</td>
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<td>100%</td>
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2011

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<th>MET</th>
<th>IMP</th>
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<td>8</td>
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<td>6</td>
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Legend:
- CONT
- CO2
- MET
- IMP
- EM

ILVO

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Conclusions

Time x alternative
EM and CO₂ scored better than expected,
MET as expected,
while IMP did not entirely match expectations

Farmer
different farmer, different preference
Thank you for your attention

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