Comparison of bovine colostrum whey and defatted bovine colostrum supplementation on piglet post-weaning growth check

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**Introduction**

**BOVINE COLOSTRUM** (BC) = Alternative to in-feed antibiotics for the newly-weaned piglet

- High concentrations in: 
  - Growth promoters
  - Anti-microbial factors

Availability in Belgium

PREVIOUS RESULTS

BC whey: + ADG, + ADFI and \- FCR

Immuno-modulator

BUT: MECHANISM of ACTION? HIGH PROCESSING COSTS

Comparison of Defatted BC and BC Whey

**Material and Methods**

**Experimental design**

- **96 newly-weaned piglets**
  - **8 x 4 piglets**
    - "Control treatment"  
      - Commercial Diet 2 + 1% of bovine milk powder
    - "Defatted BC treatment"  
      - Commercial Diet + 1% of Defatted BC 3 powder
    - "BC Whey treatment"  
      - Commercial Diet + 1% of BC Whey 3 powder

**Measures**

- Individual Weight (n = 32)
- Ingestion of each pen (n = 8)
- Faecal microflora (n = 8) b qPCR: *Escherichia coli*  
  *Lactobacillus* spp.

**Composition of the BC supplements**

<table>
<thead>
<tr>
<th>Composition (g/kg DM)</th>
<th>Defatted BC</th>
<th>BC Whey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Protein</td>
<td>765</td>
<td>688</td>
</tr>
<tr>
<td>Ash</td>
<td>56.7</td>
<td>72</td>
</tr>
<tr>
<td>Lactose</td>
<td>43</td>
<td>0.1</td>
</tr>
<tr>
<td>IgG</td>
<td>324</td>
<td>496</td>
</tr>
<tr>
<td>Lactoferrin</td>
<td>14.3</td>
<td>10.6</td>
</tr>
<tr>
<td>IGF-I</td>
<td>2 750 ng/g</td>
<td>2 500 ng/g</td>
</tr>
<tr>
<td>IGF-II</td>
<td>23 ng/g</td>
<td>25 ng/g</td>
</tr>
<tr>
<td>Insulin</td>
<td>54 ng/g</td>
<td>&lt; 1 ng/g</td>
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**Results**

**Growth performance**

![Graph showing ADG (g) vs. Days post-weaning]

**Feed intake (Week 1 PW)**

![Graph showing ADFI (g) vs. Days post-weaning]

**Faecal microflora**

No differences between the treatments

**Supplementation costs**

<table>
<thead>
<tr>
<th></th>
<th>Defatted BC</th>
<th>BC Whey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing</td>
<td>50 €/kg</td>
<td>100 €/kg</td>
</tr>
<tr>
<td>Supplementation</td>
<td>1.6 €/piglet</td>
<td>3.2 €/piglet</td>
</tr>
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**Conclusion**

The Defatted Bovine Colostrum is at least as good as Bovine Colostrum Whey to reduce the piglet post-weaning growth-check

\- Reduction by 50% of the treatment costs