Effect of maternal feed intake during mid-gestation on pig performance, meat quality and muscle fiber development

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INTRODUCTION

Increasing feed allowance during gestation has been related with changes in muscle fiber development and pig performance post-natally, affecting meat quality traits at slaughter.

OBJECTIVE

The aim of the present experiment is to study, under commercial conditions, the implications of providing a higher feed intake to the sows during mid-gestation.

MATERIALS AND METHODS

103 sows from 1 to 5 parity

2 treatments: CONTROL (C, n=49): fed with 3 kg/d throughout gestation (2.9 Mcal ME/kg feed and 6 g lys/ kg feed)

EXPERIMENTAL (E, n=54): fed +50% (first parity sows) and +75% (multiparous sows) than C from d 45 to d 85 of gestation

Barrows from cycle 1 and 3 were divided in 5 weight groups and reared conventionally during nursery (n=958) and growing-finishing period (n=636)

Carcass (lean meat content, main cuts weight, backfat thickness and lean depth) and meat (pH24, pH48, Minolta colour and drip loss) quality was measured (n=90)

RESULTS

GROWING PERFORMANCE: E pigs showed a better growth performance than C pigs in the nursery period, but the differences disappeared in the growing-finishing period (Tables 1 and 2).

<table>
<thead>
<tr>
<th>Cycle 1</th>
<th>C</th>
<th>E</th>
<th>SE</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>476</td>
<td>482</td>
<td></td>
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</tr>
<tr>
<td>ADFI, g/d</td>
<td>430</td>
<td>448</td>
<td>0.004</td>
<td>0.013</td>
</tr>
<tr>
<td>ADG, g/d</td>
<td>316</td>
<td>333</td>
<td>0.004</td>
<td>0.232</td>
</tr>
<tr>
<td>G:F</td>
<td>0.73</td>
<td>0.74</td>
<td>0.005</td>
<td>0.627</td>
</tr>
</tbody>
</table>

Table 1. Growth performance during the nursery period (cycles 1 and 3)