How to use BMR sorghum silage to feed dairy cows and heifers?

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AIM OF THE STUDY
Evaluate the interest of Brown Mid Rib (BMR) sorghum silage on both dairy cows and heifers performances

MATERIALS AND METHOD
1 experimental farm located in Pays-de-Loire
5 trials on dairy cows and 3 trials on dairy heifers / reference diet is based on maize silage
Measurements of milk production, milk solids, body weight and body score condition, and individual intake for cows (photo) and twice a week for groups of heifers

<table>
<thead>
<tr>
<th>Trial</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>H1</th>
<th>H2</th>
<th>H3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lactation status</td>
<td>Mid lactation</td>
<td>Early lactation</td>
<td>Mid lactation</td>
<td>Mid lactation</td>
<td>Mid lactation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Number of animals</td>
<td>2 × 16</td>
<td>2 × 19</td>
<td>2 × 16</td>
<td>2 × 16</td>
<td>2 × 21</td>
<td>2 × 15</td>
<td>2 × 15</td>
<td>2 × 15</td>
</tr>
<tr>
<td>Forage share of sorghum silage*</td>
<td>50%</td>
<td>50%</td>
<td>65%</td>
<td>100%</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Forage share of maize silage*</td>
<td>50%</td>
<td>50%</td>
<td>35%</td>
<td>0%</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*: all diets were complemented with rapeseed meals and maize grains to fit the needs of the different groups of animals

RESULTS
Main conclusions for cows:
• Standardised milk production is maintained while intake significantly decreased
• Fat content strongly and steadily decreased (-2.6 to -4.4 g/kg)
• Beyond 65% of BMR sorghum silage in the forages, performances decreased

Main conclusions for heifers:
• The growth objectives have been reached (450 to 480 kg at the end of winter)
• The goal of 24-months calving have also been reached

CONCLUSION
This study shows that BMR sorghum silage is well adapted for feeding dairy herds. These results give important skills to use this forage in an optimal way. There are still some agronomical researches under process to improve the knowledge.