The effect of grass silage feed value on concentrate requirements during late gestation

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TOPIC: 

- Reproduction
- Lamb mortality “management”
- Gestation
- Lamb mortality “ewe-lamb”

ISSUE: Nutritional management/grassland

Solution name: The effect of grass silage feed value on concentrate requirements during late gestation

Country: Ireland

Dairy or/and meat sheep: Meat/dairy

Source of information: Teagasc

Level of solution:

- Knowledge
- Practical
- Just Being Tested

Aim: To present the effects of grass silage feed value on concentrate requirements during late pregnancy

Description:

- Silage digestibility [dry matter digestibility (DMD), digestible organic matter in the dry matter (DOMD, D-Value) metabolisable energy (ME)] is the main factor affecting grass silage feed value.
- Silage DMD (g/kg DM) = 49.1 + 0.988 DOMD (g/kg DM)
- Silage ME (mj/kg DM) = 0.16 DOMD (g/kg DM)
- Silage feed value must be determined to develop a nutritional plan.
- Concentrates are supplemented during late pregnancy to meet nutrient requirements.
- Silage chop length also affects silage intake by sheep.
- The effect of silage feed value and chop length on concentrate requirement during late pregnancy for twin bearing ewes is presented in Table 1. Reduce by 5 kg for single bearing ewes and increase by 8 kg for triplet bearing ewes.
Table 1. Effects of silage quality on total concentrate requirements (kg/ewe) of twin bearing ewes during late pregnancy

<table>
<thead>
<tr>
<th>Silage DMD (g/kg DM)</th>
<th>790</th>
<th>720</th>
<th>640</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision chopped</td>
<td>8</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Single chopped</td>
<td>12</td>
<td>24</td>
<td>35</td>
</tr>
</tbody>
</table>

- For example, reducing silage DMD from 790g/kg to 640g/kg results in an additional 17 and 23 kg of concentrate required for twin bearing ewes during the final six weeks of pregnancy for precision and single chopped silages, respectively.

**Expected benefits:**

- Each 50g/kg increase in silage digestibility increases:
  a) ewe weight post lambing by 6.5kg
  b) lamb birth weight by 262g
- Enables optimum use of concentrate supplementation thus reducing costs.

**Prerequisites and/or limits:**

- Silage feed value must be determined (laboratory analysis) to develop a feed plan.
Effect of silage feed value on concentrate requirement during late pregnancy

- Silage digestibility is the most important factor effecting feed value

Each 50g/kg increase in digestibility increases:
  a) ewe weight at lambing by 6.5kg
  b) lamb birth weight by 262g

High feed value 790 g/kg  Low feed value 640 g/kg

Concentrate requirement in late lactation

8 kg/ewe  35 kg/ewe

125 ewes  29 ewes

Expected benefits
- Improved flock performance
- Reduced concentrate requirement

Limitations
- Feed value must be determined to develop feed plan