Planning Spring/Summer 2018

Poppy Frater – Sheep Specialist

SAC Consulting is a division of Scotland’s Rural College
Leading the way in Agriculture and Rural Research, Education and Consulting
Outline

1. Soil structure after 2017
2. Ewe nutrition: late pregnancy- lactation
3. Minimising stress at lambing
4. Sustainable health planning
5. Lactation
Compaction – does it matter?
AHDB Dairy Compaction Experiment

The compaction experiment – 2011 to 2014.

Three main treatments:

- Trampling
- Mechanical load
- No compaction

SRUC Crichton (Scotland) and Harper Adams University (England)
# Dry Matter Yield Reductions (t/ha)

<table>
<thead>
<tr>
<th>Year</th>
<th>SRUC</th>
<th>Harper Adams</th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Yield Reduction (t/ha)</td>
<td>Percent reduction (%)</td>
<td>Yield Reduction (t/ha)</td>
<td>Percent reduction (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trampled</td>
<td>Tractor</td>
<td>Trampled</td>
<td>Tractor</td>
<td>Trampled</td>
<td>Tractor</td>
</tr>
<tr>
<td>2012</td>
<td>0.6</td>
<td>0.3</td>
<td>6.5</td>
<td>1.0</td>
<td>0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>2013</td>
<td>0.4</td>
<td>1.0</td>
<td>5.6</td>
<td>11.5</td>
<td>0.2</td>
<td>0.6</td>
</tr>
<tr>
<td>2014</td>
<td>1.6</td>
<td>2.0</td>
<td>11.0</td>
<td>14.3</td>
<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>All Years</td>
<td>2.6</td>
<td>3.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.8</td>
<td>3.0</td>
<td></td>
<td></td>
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</table>
Compaction – does it matter?
Yes – what an we do?
Moderate over Good

Limiting layer

Good over Poor

Limiting layer
Structure

- Signs of poor soil structure?
Structure: action required?

Target compaction with correct kit

- 0-10 cm – aerator
- 10-15 cm – sward lifter

Timing – Autumn if conditions allow, otherwise Spring
Prevention—controlled traffic

- 9 m triple gang mower (9 m working width)
# Results of Experimental Work

<table>
<thead>
<tr>
<th>Silage Cut</th>
<th>Normal Traffic</th>
<th>Controlled Traffic</th>
<th>Difference (t DM ha(^{-1}))</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(^{st}) Cut</td>
<td>5.28</td>
<td>5.43</td>
<td>0.15</td>
<td>0.27</td>
</tr>
<tr>
<td>2(^{nd}) Cut</td>
<td>3.58</td>
<td>3.88</td>
<td>0.30</td>
<td>0.72</td>
</tr>
<tr>
<td>3(^{rd}) Cut</td>
<td>2.34</td>
<td>2.84</td>
<td>0.50</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>2(^{nd}) + 3(^{rd}) Cut</td>
<td>5.92</td>
<td>6.72</td>
<td>0.80</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Total silage</td>
<td>11.29</td>
<td>12.15</td>
<td>0.96</td>
<td></td>
</tr>
</tbody>
</table>
Why is all this important?

Leaf 11.5 MJ ME/kg DM
Stems 10.5 MJ ME/kg DM
Dead leaves <8 MJ ME/kg DM
Forage for Knowledge - 2017 Grass Quality

Data updated as of 3 November 2017
Use feed to fill deficits

**Pasture growth**

**Animal Demand - April lambing**
Late pregnancy

Only 25% of final weight with just 6 weeks to go!

Not a time for low quality feeds when intake is constrained
Late pregnancy – last 6 weeks

In addition:
- Udder development
- Colostrum production
- Maintain immunity
Increasing requirement with decreasing appetite!
ENERGY REQUIREMENTS OF PREGNANT EWES
75kg TWIN BEARING

ENERGY (MJ ME/day)

WEEKS BEFORE LAMING

Good silage

Good hay / baled silage

Average Hay

Straw

Full Requirement

Allowance for fit ewes
A nutritional issue

Figure 6. Effect of concentrate feeding on rumen pH (adapted from Orskov)
DUP stands for Digestible Undegradable protein; it is protected from degradation by the rumen microbes and is absorbed through the intestine.
Options for late pregnancy

Target BCS is 3

• Grass (grass>4cm)
• Silage (10.5 MJ ME/kg DM) plus 100g soya/lamb or 50g protected soya/lamb
• Silage (<10.5 MJ ME/kg DM) plus sugarbeet pulp/oats/whole barley plus soya
Pre lambing

Check energy of ration 4 weeks pre-lambing:
-Blood test – beta hydroxybutyrate
Are they getting enough?
Stress
Maternal behaviour

Pregnancy

Labour

Birth

Age/experience Genetics

Lamb signals
Stress around birth

Sheep like:
- Calm, quiet and predictable environment
- Familiarity

Sheep don’t like:
- Mixing with other unfamiliar sheep
- Unpredictability e.g. at feeding
- Dogs
- Loud and extravert handling
- Novelty
## Competition - Stress

### Table 12. Trough space

<table>
<thead>
<tr>
<th></th>
<th>Concentrates (mm/ewe)</th>
<th>Restricted forage (mm/ewe)</th>
<th>Ad-lib forage and TMR* (mm/ewe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large ewes (70–90kg)</td>
<td>500</td>
<td>250</td>
<td>150</td>
</tr>
<tr>
<td>Small ewes (50–70kg)</td>
<td>450</td>
<td>200</td>
<td>150</td>
</tr>
</tbody>
</table>

*Notes: *TMR use the same allowance as ad-lib forage.
Preventative health measures
Proactive worm control

Source: http://www.farmhealthonline.com
The other side of the coin

Source: AHDB Beef and Lamb – Worm Control for Better Returns
Strongyle counts

- Gimmer triplets
- Gimmer twins
- Gimmer singles
- Ewe triplets
- Ewe twins
- Ewe singles

Body condition score

Strongyle count

- 1
- 1.5
- 2
- 2.5
- 3
- 3.5
- 4
- 4.5
- 5
Key message:
Leave a proportion untreated to reduce selection pressure

Singles

>CS 3
Antibiotics…

#Colostrum Is Gold

A tale of two lambs -
A lamb charged with sufficient colostrum early enough can cope with a few bugs & a healthy population establishes

© Flock Health Ltd 2017
# Consider risk

<table>
<thead>
<tr>
<th>Low risk</th>
<th>Higher risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single lambs</td>
<td>Triplets+</td>
</tr>
<tr>
<td>Lambs that were born unassisted</td>
<td>Difficult birthing</td>
</tr>
<tr>
<td>Sufficient colostrum</td>
<td>Insufficient colostrum/artifical colostrum</td>
</tr>
<tr>
<td>Born early in lambing season</td>
<td>Born mid-late in season</td>
</tr>
<tr>
<td>Healthy mums on target BCS</td>
<td>Thin, lame, dirty mums</td>
</tr>
<tr>
<td>No disease within the season</td>
<td>Disease prevalent</td>
</tr>
</tbody>
</table>
EWE NUTRITION AND BODY CONDITION SCORING TIMELINE

**Meaning to tupping**
Get ewes fit for production.
Aim to get all ewes to target BCS 3 – 3.5.
Offer lambs the best grass.

**1st 50 Days**
Take care of the eggs & developing embryo.
Look to maintain BCS for embryo survival.
Minimise stress on the ewe with no sudden changes in diet.

**2nd 50 Days**
Let the placenta grow and develop.
A well grown placenta = good lamb development and birthweight.
Ewes that were above target BCS at tupping can lose half a BCS.

**3rd 50 Days**
Ensure ewes are fit for lambing.
Growing fetus and udder increases nutritional demands.
Maintaining BCS will minimise and metabolic problems, maximise colostrum production, lamb vigour and survival.

**Early Lactation**
Maximise milk production.
Total milk production is driven by high quality pasture and body condition.

**Late Lactation**
Maximise lamb growth.
Lamb growth driven by pasture quality as ewe milk production declines.
Wean at 90-100 days and offer lambs the best grass.

**Golden 20 days**
Move ewes to fresh pasture regularly, ideally daily, for 10 days before and after tupping to allow scanning %

**Golden 35 days**
Essential to feed to maintain BCS.
Under feeding in last 35 days will cut lactation and reduce lamb vigour

**Pasture allocation for rotational grazing**
(for 75kg ewe)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Maintenance</th>
<th>Lactation, 1 lamb</th>
<th>Lactation, 2 lambs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME/ha/day</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Dry matter</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
</tbody>
</table>

These guidelines are applicable to mature ewes on a pasture-based dairy or free-range system. Individual requirements may vary. Penicillin and tylosin may be necessary for management at certain stages. Internal parasites and mineral deficiencies can also affect nutritional efficiency and BCS. Scanning, lambing and weaning intervals are approximate.

For further information, visit www.qmscotland.co.uk
Early lactation

Poor feeding and low BCS – risk factors for teat lesions

- Cheapest ration: Grass
- If below 4cm – supplement with concentrates or energy licks
- Magnesium licks and/or hay/silage
Figure 8. A guide to concentrate supplement feed intake by sward height for twin rearing ewes
Late lactation

Figure 9. The milk to grass transition for lambs reared as twins (Beef & Lamb NZ)

Notes: See glossary on page 2 for definitions of abbreviations.
From soil to lamb

Optimal Quality