Improving Flock Performance

Ben Anthony, Diana Fairclough and Lesley Stubbings

SHAWG Conference
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What do we mean by ‘Flock performance’?

• **Physical:**
  - Lambs reared/ewe
  - Kgs lamb reared/ewe (production index)
  - Kgs lamb / hectare
  - Kgs lamb / 100kgs ewe carried
Financial?

• **Financial:**

• Gross margin / ewe or Ha
• Net margin / ewe or Ha

• Cost of production (p/kg)

• Cost + (p/kg) profit
Improving Flock Performance
- Ben Anthony
Background Information

• Took over in 2010 from Diana’s parents
• Trade as Anthony & Fairclough
• Frowen is 145 acres, of this 110 clean & 35 woodland
• Gently sloping with some steep banks
• Mainly permanent pasture
• 600 – 650 feet above sea level
• Rent 90 acres
• Currently 560 ewes & 251 ewe lambs
• 15 Suckler Cows plus calves at foot
• Christmas turkey and chicken enterprise
Current Operation

• Turning Frowen into an easily managed Sheep farm
• Forage based high output flock
• Indoor lambing flock
• Suckler cows used as a grassland management tool
Our Sheep Enterprise Aims

• Have a Simple but Sustainable System
• Concentrate on Fat Lamb Production
• Finish Lambs off a Forage Based System
• Buy all replacement from one source
• Scanning target 180-185%
• Rearing 165%
Key performance indicators for the flock:

- Scanning %
- Rearing/selling%
- Lamb growth (DLWG’S)
- Days on farm
- Output kg/ha
What data we record

• Scanning
• Tag and record at birth
• Link lambs to dam and sire
• Record lamb losses and why
• 8 week weights
• Ewe weights and condition scores
• Record lamb weights pre-slaughter
• Slaughter reports
• Problem ewes
• All other weights throughout the time the lamb is on farm
The biggest drivers of our flock performance:

- Ewes genetic
- Ewe body condition score
- Ewe nutrition
- Lambing to grass
- Grass management
- Performance recorded rams
- Tighter lambing more uniformed lambs
- Early weaning
What we did to soil and grassland

- Nutrient Management Plan
- PH is key
- Addressed P & K levels
- Looked at compaction issues
- Different establishment methods
- Reseeding – looked at different crop options
Grassland Management / Forage Crops

• Swedes
• Fodder Beet
• Red Clover leys
• High quality grass leys
• Undersown Wholecrop
• Stubble Turnip & Rape mix
• Rape & Ryegrass
• Plantain, Chicory, Clover & Grass

• Rotational Grazing
• Deferred Grazing
Sheep Feeding Pre & Post Lambing

• Silage Analysis
• 21% Protein Cake with High Soya content
• Cost more per Ton but we used less – overall saving £3000
• Stopped using Blocks & Buckets
• Improved Ewe & Lamb Health
Early Weaning / DLWG

• DLWG of lambs from birth to 06/06/2014 – 290g/day
• DLWG of lambs from 06/06/14 – 28/06/2014 – 160g/day
• DLWG of lambs from 28/06/14 to 17/07/14 – 400g/day
Things we’ve Changed & Why

• Breed of Ewes
• Teaser Rams
• Performance Recorded Rams
• Lambing Period
• Feeding Regime pre & post lambing
• Earlier Weaning
• Lamb Sales – Live to Dead
• EID – record flock performance & ACT ON IT !!!!!!!
• Condition Score Ewes throughout the season
• FEC samples
## Improved flock performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Scanning %</th>
<th>Losses % Scanning to Turn Out</th>
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<tbody>
<tr>
<td>2011</td>
<td>150</td>
<td>7.4</td>
</tr>
<tr>
<td>2012</td>
<td>165</td>
<td>16.7</td>
</tr>
<tr>
<td>2013</td>
<td>166</td>
<td>22.3</td>
</tr>
<tr>
<td>2014</td>
<td>170</td>
<td>5.1</td>
</tr>
<tr>
<td>2015</td>
<td>189</td>
<td>3.9</td>
</tr>
<tr>
<td>2016</td>
<td>195</td>
<td>4.8</td>
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</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Rearing %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>154</td>
</tr>
<tr>
<td>2015</td>
<td>183</td>
</tr>
<tr>
<td>2016</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td>Numbers sold</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>2014</td>
<td>745</td>
</tr>
<tr>
<td>2015</td>
<td>1000</td>
</tr>
<tr>
<td>2016</td>
<td>1117</td>
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</table>

+372 lambs          +14,420kg +312kg -0.98kg -1.48kg

<table>
<thead>
<tr>
<th></th>
<th>£/ewe</th>
<th>£/ha</th>
<th>Kg/ewe LW</th>
<th>Kg /ewe DW</th>
<th>£/ewe</th>
<th>£/ha</th>
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<tr>
<td>2014</td>
<td>57,892</td>
<td>77.71</td>
<td>91.89</td>
<td>49.60</td>
<td>23.09</td>
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<tr>
<td>2015</td>
<td>65,016</td>
<td>65.01</td>
<td>103.20</td>
<td>64.96</td>
<td>30.53</td>
<td>103.20</td>
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<tr>
<td>2016</td>
<td>85,740</td>
<td>76.76</td>
<td>127.90</td>
<td>68.16</td>
<td>30.54</td>
<td>127.97</td>
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</tbody>
</table>

+£27,848 -£0.95 +£36.01 +18.56kg +7.45kg +36.01 +£285.05
Areas to look at next

• Maintaining current performance and try to better it
• Continue to improve efficiencies (genetics, grass measuring)
• More rotational grazing
• Infrastructure (fencing, sheep housing)
• Lamb in one bunch/lot/mob
• Have 5 crops of lambs from ewes then sell
• Improve autumn lamb performance!!!!
• Use EID to pull out under performing ewes
• Farm diversification (Wigwam holiday site)
Acknowledgements

• Diana’s Parents – Geoff & Joyce Fairclough
• Ben’s Parents – Peter & Mary Anthony
• Charlie Morgan – Grassmaster Ltd
• Lesley Stubbings OBE – LSSC Ltd
• Farming Connect – Sion Evans
• Innovis
Any questions?
Must be able to measure it!

1. **Measure** Current Performance
2. **Identify** Main Weaknesses and Prioritise
3. **Find** Technical Solutions and Implement
4. **Measure Impact** and Start Again

SHAWG
Sheep Health & Welfare Group
Nutrition: A key factor in the improvement

• Body Condition

• Feeding in Pregnancy and lactation
Body Condition – longer term

- Achieve Targets
- Avoid major deviations at any time
- Tight pattern across the flock
BCS (weight) effects

LITTER SIZE

EWE BCS

Adjusted Ewe Scan values

EWE WEIGHT CHANGE

SHAWG Sheep Health & Welfare Group
BCS has longer term impacts:

- Weaning – mating BCS has an impact on 8 week weights.
- Even if we get late pregnancy feeding right this affect is still there.
- BCS drives performance
Late Pregnancy Feeding

**THE CHALLENGE**

- Crucial implantation period
- Placental growth scan
- Nutrition needs rise rapidly

**Growth of a foetus**

- Weight (kg)
- Days of gestation
- Early pregnancy
- Mid pregnancy
- Late pregnancy
- Birth
Pressure from the growing foetus reduces the ewe’s ability to eat bulk food.
Forage Analysis

• How much energy and protein in every kg of dry matter?

• How many kgs of dry matter will the ewes eat?

• Average hay 1.4-1.5
• Good silage 1.8+
<table>
<thead>
<tr>
<th>SILAGE</th>
<th>Tonnes total</th>
<th>Dm%</th>
<th>Dm (kgs) total</th>
<th>ME</th>
<th>FME</th>
<th>CP</th>
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<tr>
<td>Arable 1</td>
<td>54</td>
<td>28.5</td>
<td>15,000</td>
<td>9.9</td>
<td>8</td>
<td>13.7</td>
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<td>(WC)</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Arable 2</td>
<td>91</td>
<td>32.4</td>
<td>29,000</td>
<td>10</td>
<td>8.5</td>
<td>11.5</td>
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<td>(RC)</td>
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<tr>
<td>Red Clover</td>
<td>50</td>
<td>35.1</td>
<td>17,500</td>
<td>11.2</td>
<td>9.1</td>
<td>16.5</td>
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<tr>
<td>1st cut</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Clover</td>
<td>30</td>
<td>38</td>
<td>11,400</td>
<td>11.2</td>
<td>9</td>
<td>19.4</td>
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<tr>
<td>2st cut</td>
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<td></td>
</tr>
<tr>
<td>Grass 1st cut</td>
<td>27</td>
<td>39.3</td>
<td>10,600</td>
<td>10.7</td>
<td>9</td>
<td>14.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>252</td>
<td></td>
<td>83,500</td>
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</tr>
</tbody>
</table>
Supplement:

- To match requirements
- As small a quantity as we could
- High protein (21% minimum – up to 34% if necessary)
- High energy (13MJ ME)
- High cost/tonne
Net Result?

- Increase in forage utilisation
- Reduced lamb (and ewe) losses
- Improved lamb growth rates
- Ewe BCS profile Reduced feed costs
  - (£11/ewe in 2012; £5/ewe in 2014)
  - 2013 £15/ewe – lactation in very bad spring.

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Future Challenges?

- Improve Efficiency
- Reduce the cost of production
- \((p/Kg \text{ carcase sold})\)
Quality and Value of end product

- Abattoir feedback
- Minimising lambs out of spec.
- Optimising carcase weights
- Monitoring inputs v. end price
Robustness of the flock

- Keep measuring and monitoring
- Reduce variation across the flock
- Replacements – growth curves and targets

Graph 1: BCS changes over the year

- tup
- scan
- 4wk
- 8wk
- Wean

Time intervals:
1 1.5 2 2.25 2.5 2.75 3 3.5 4 4.25
Must be able to measure it!

Measure
Current Performance

Identify
Main Weaknesses and
Prioritise

Find
Technical Solutions and
Implement

Measure Impact
and
Start Again