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)


TRAMPLED REP 3
PLOT 40


REP 1
PLOT 11

Dry Matter Yield Reductions (t/ha)

	SRUC					Harper Adams			
	Yield Reduction (t/ha)		Percent reduction (%)			Yield Reduction (t/ha)		Percent reduction (%)	
	Trampled	Tractor	Trampled	Tractor		Trampled	Tractor	Trampled	Tractor
2012	0.6	0.3	6.5	1.0		0.6	0.1	6.2	1.8
2013	0.4	1.0	5.6	11.5		0.2	0.6	1.9	-5.1
2014	1.6	2.0	11.0	14.3		2.0	2.3	12.2	14.3
All Years	2.6	3.3				2.8	3.0		

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?

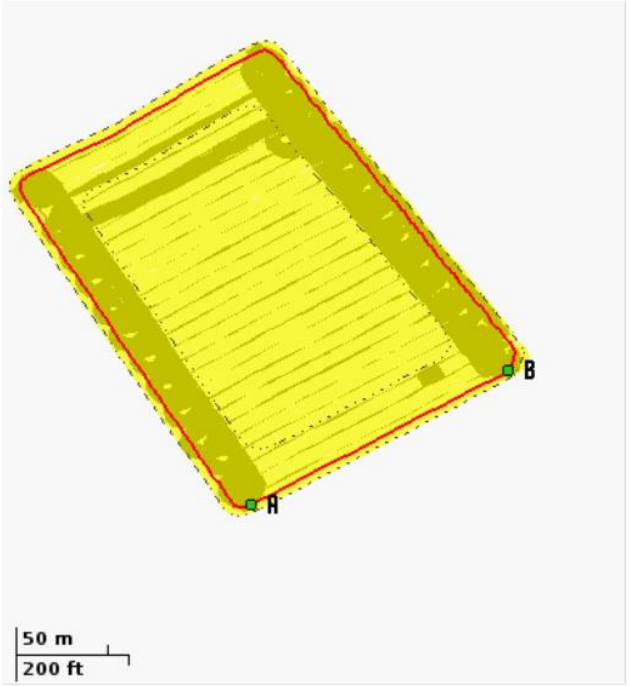
Structure: action required?

Target compaction with correct kit

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

Timing – Autumn if conditions allow, otherwise Spring

Prevention– controlled traffic

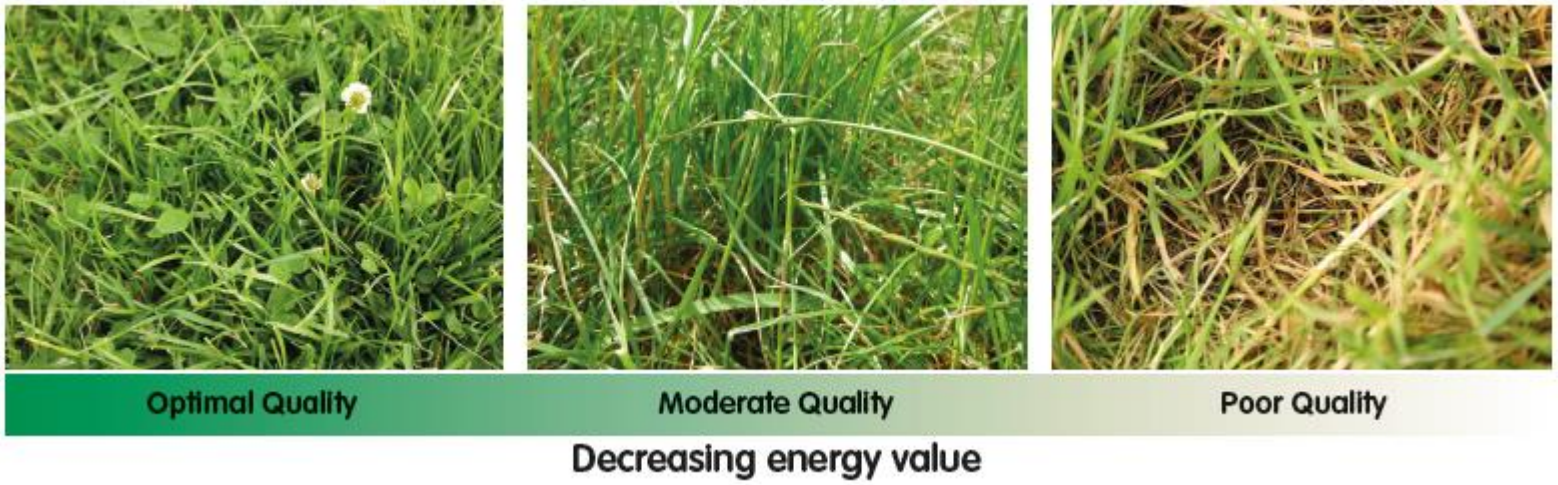


- 9 m triple gang mower (9 m working width)

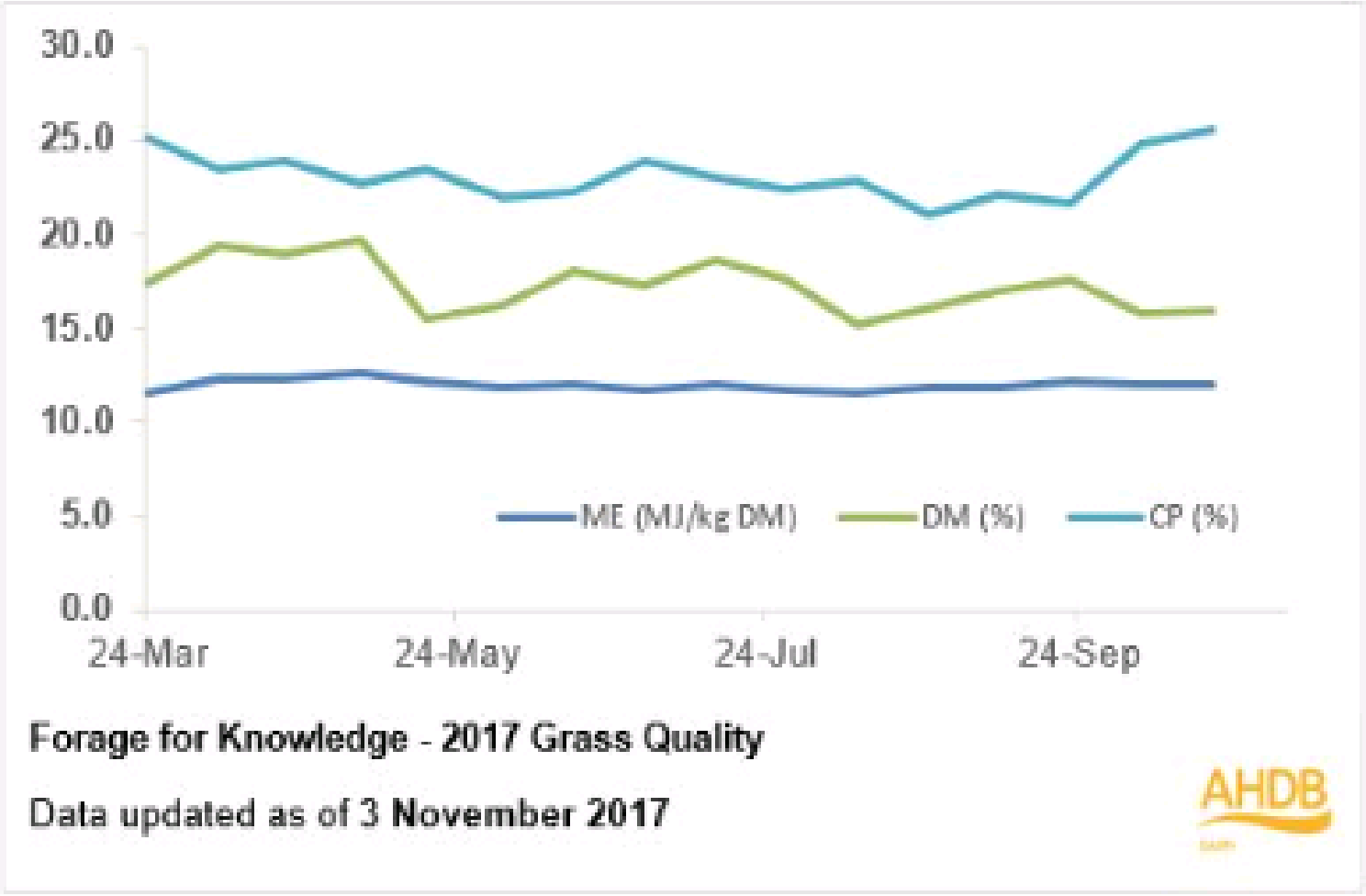
Results of Experimental Work

Silage Cut	Normal Traffic	Controlled Traffic	Difference (t DM ha^{-1})	P-value
1st Cut (t DM ha^{-1})	5.28	5.43	0.15	0.27
2nd Cut (t DM ha^{-1})	3.58	3.88	0.30	0.72
3rd Cut (t DM ha^{-1})	2.34	2.84	0.50	**<0.01**
2nd + 3rd Cut	5.92	6.72	0.80	**<0.05**
Total silage	11.29	12.15	0.96	

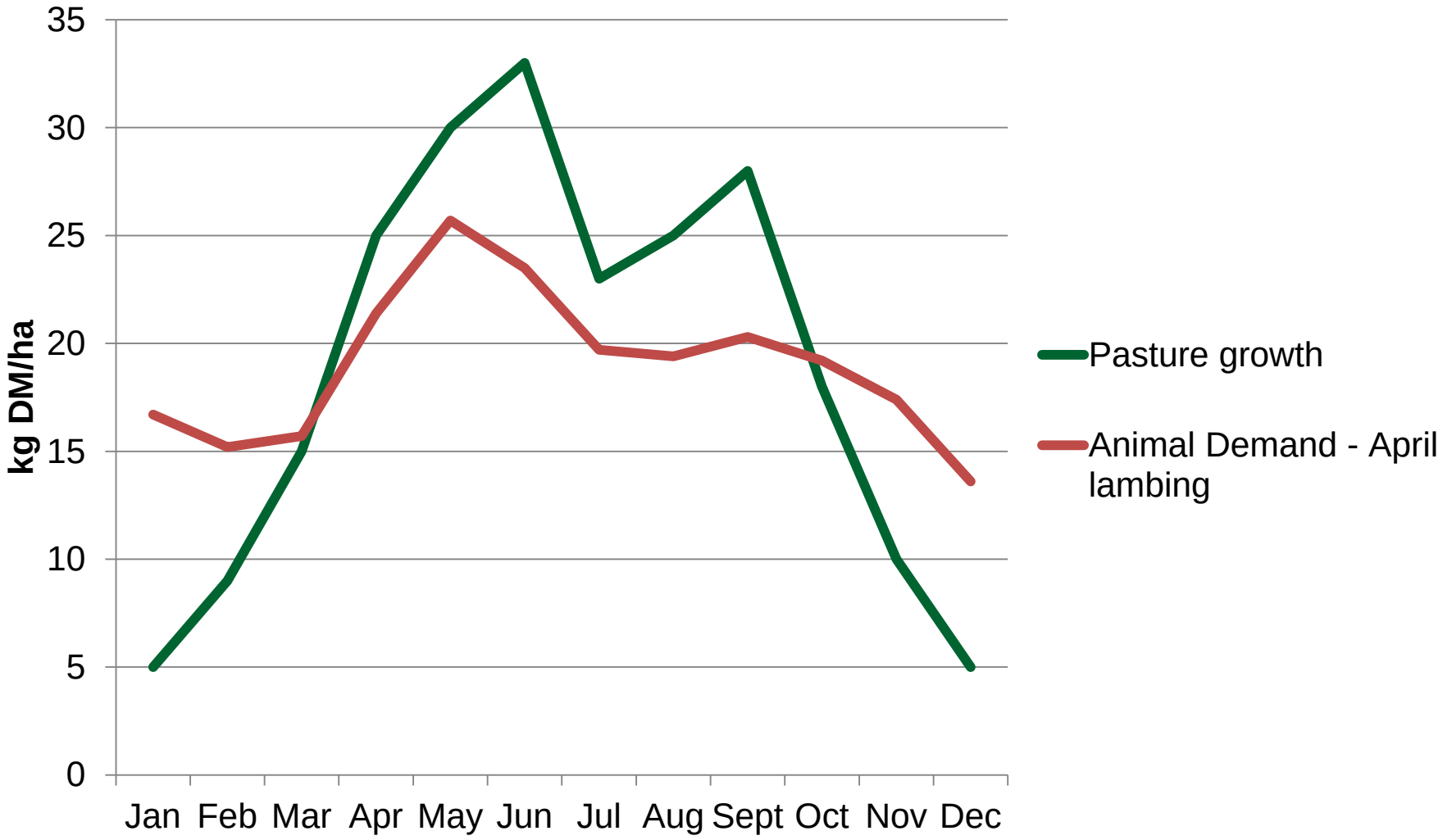
Why is all this important?



Leaf 11.5 MJ ME/kg DM
Stems 10.5 MJ ME/kg DM
Dead leaves <8 MJ ME/kg DM


30.0
25.0
20.0
15.0
10.0
5.0
0.0
ME (MJ/kg DM)
DM (%)
CP (%)
24-Mar
24-May
24-Jul
24-Sep
Forage for Knowledge - 2017 Grass Quality
Data updated as of 3 November 2017
AHDB

Use feed to fill deficits



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EWE NUTRITION AND BODY CONDITION SCORING TIMELINE

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Weaning to tupping

Get ewes fit for production.

Aim to get all ewes to target BCS 3 – 3.5.

Offer lean ewes 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 foetus and udder increases nutritional demands.

Maintaining BCS will minimise ewe 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.

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Most ewes tupped by day 25

Embryo implantation complete by day 55

Scanning

Lambing

Peak lactation

Weaning

-40 -30 -20 -10 0 Days 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 250

COMPLETE DATES IN THIS SECTION RELEVANT TO THE LAMBING SEASON

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Ewes likely to gain condition → BCS 3 **TARGET**

PASTURE ALLOCATION FOR ROTATIONAL GRAZING (for 75kg ewe)

	x Maintenance	MJME/day required	kgDM/day assuming 10 MJME grass*
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*These figures assume 20% grass wastage

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Late pregnancy	Singles	1.1	13.0	1.5
	Twins	1.5	16.5	1.8

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		x Maintenance	MJME/day required	kgDM/day assuming 12 MJME grass*
Peak Lactation	Singles	2.0	22.5	2.8
	Twins	3.0	34.5	3.5

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These guidelines are applicable to mature ewes on a pasture based upland or lowground system. Individual ewe requirements may vary. Prolific breeds and hoggs may require different management at certain stages. Internal parasites and mineral deficiencies can also affect nutritional efficiency and BCS. Scanning, lambing and peak lactation timings are approximate.

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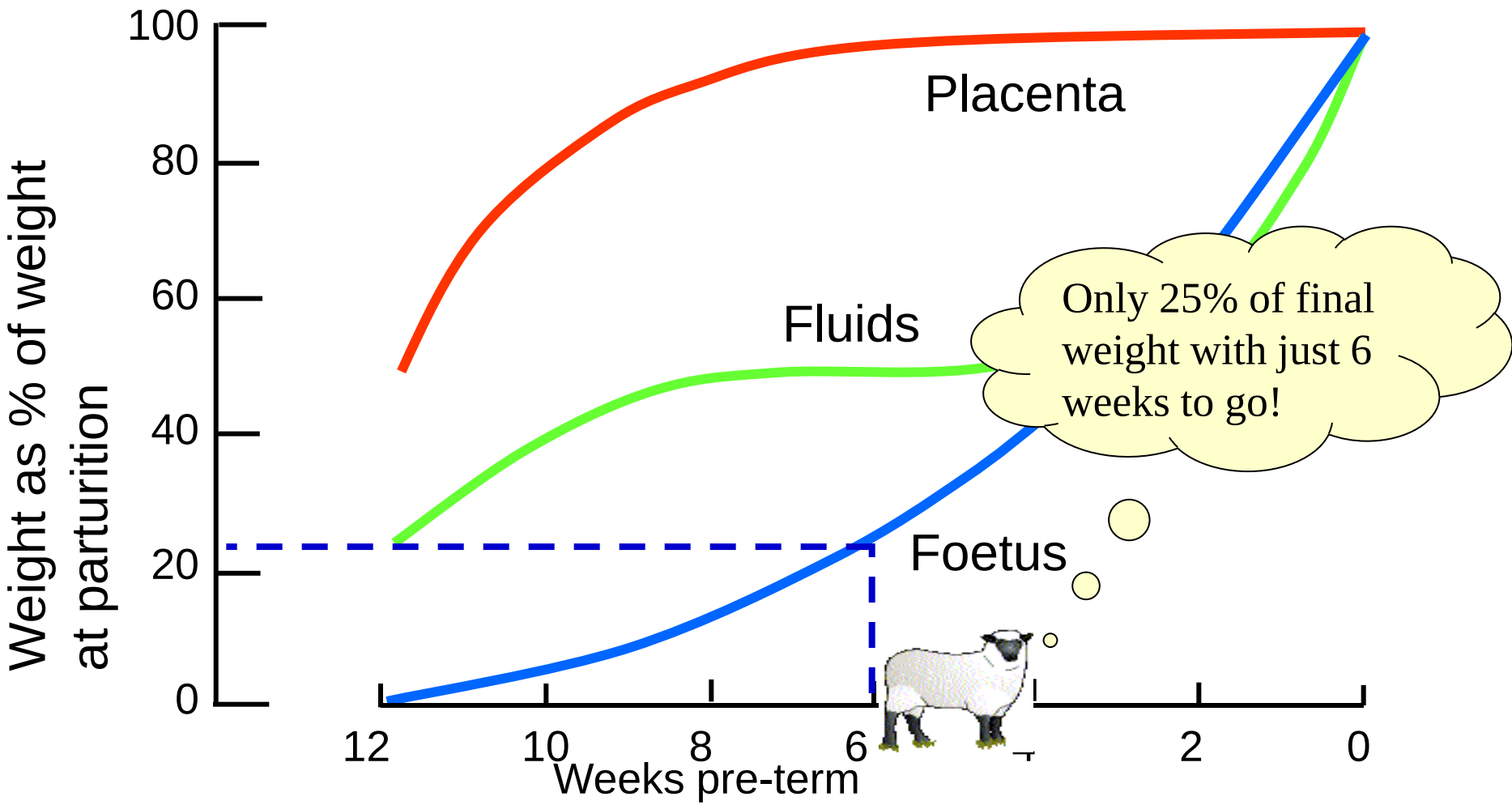
Late pregnancy



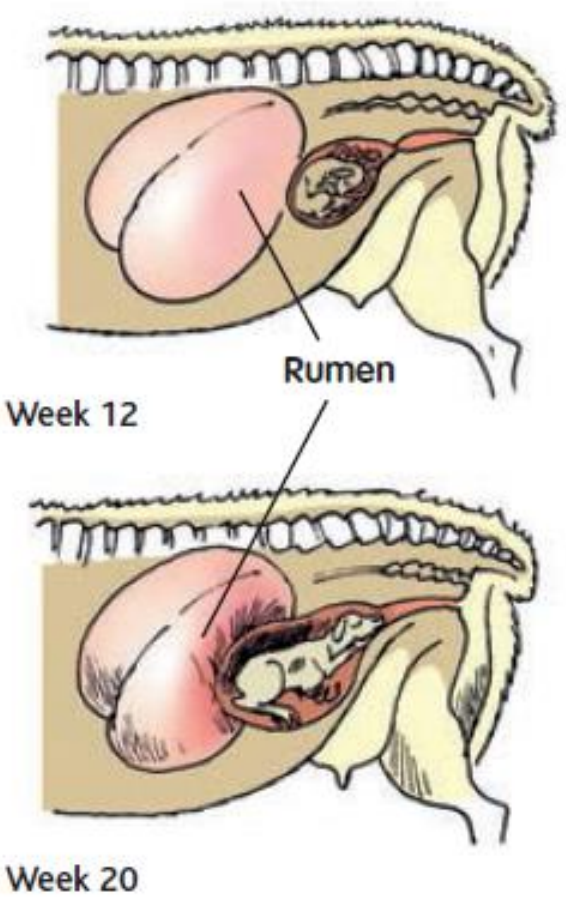
Not a time for low quality feeds when intake is constrained

Late pregnancy – last 6 weeks

In addition:

- Udder development
- Colostrum production
- Maintain immunity

Increasing requirement with decreasing appetite!



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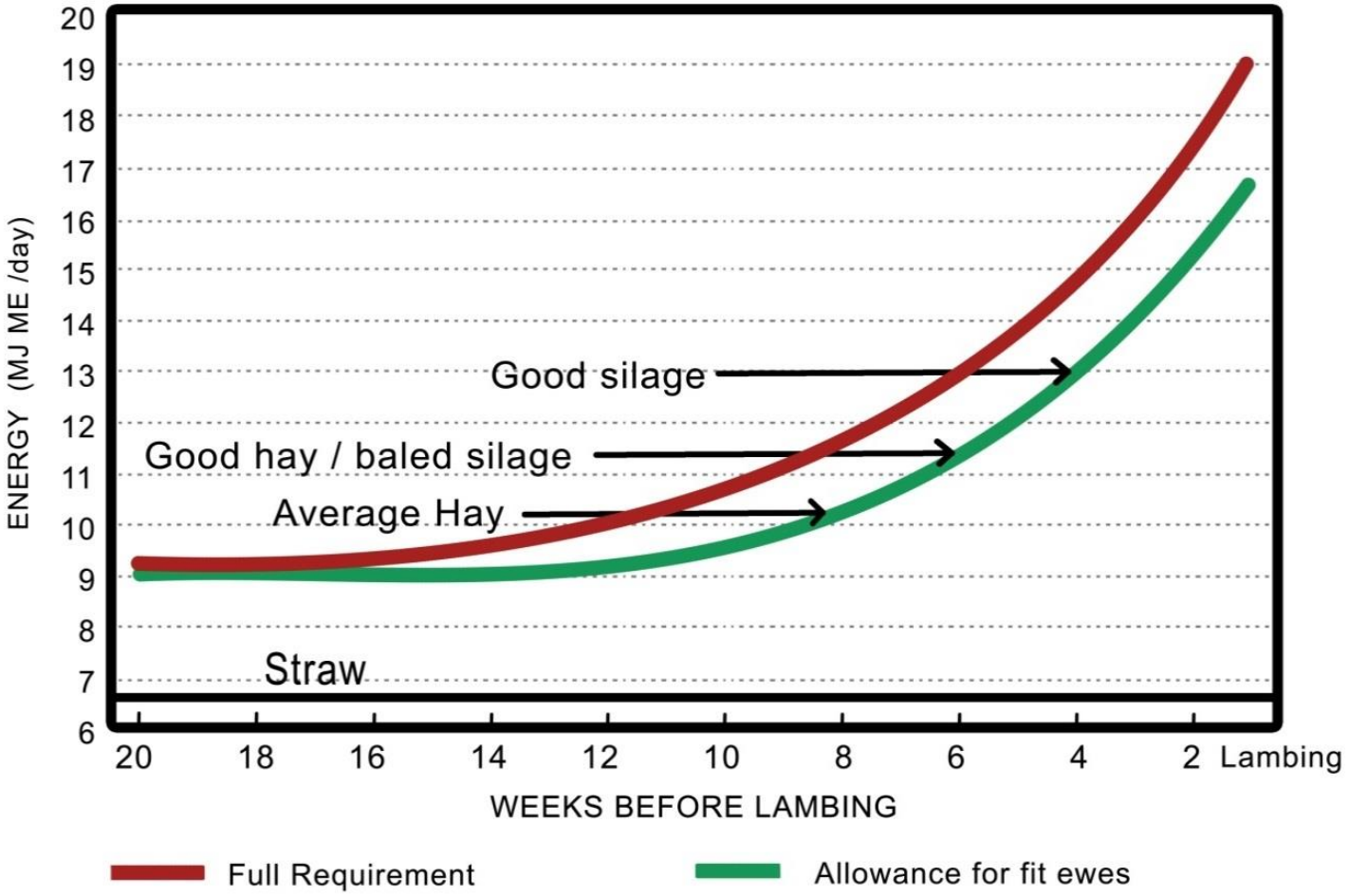
ENERGY REQUIREMENTS OF PREGNANT EWES
75kg TWIN BEARING



A nutritional issue

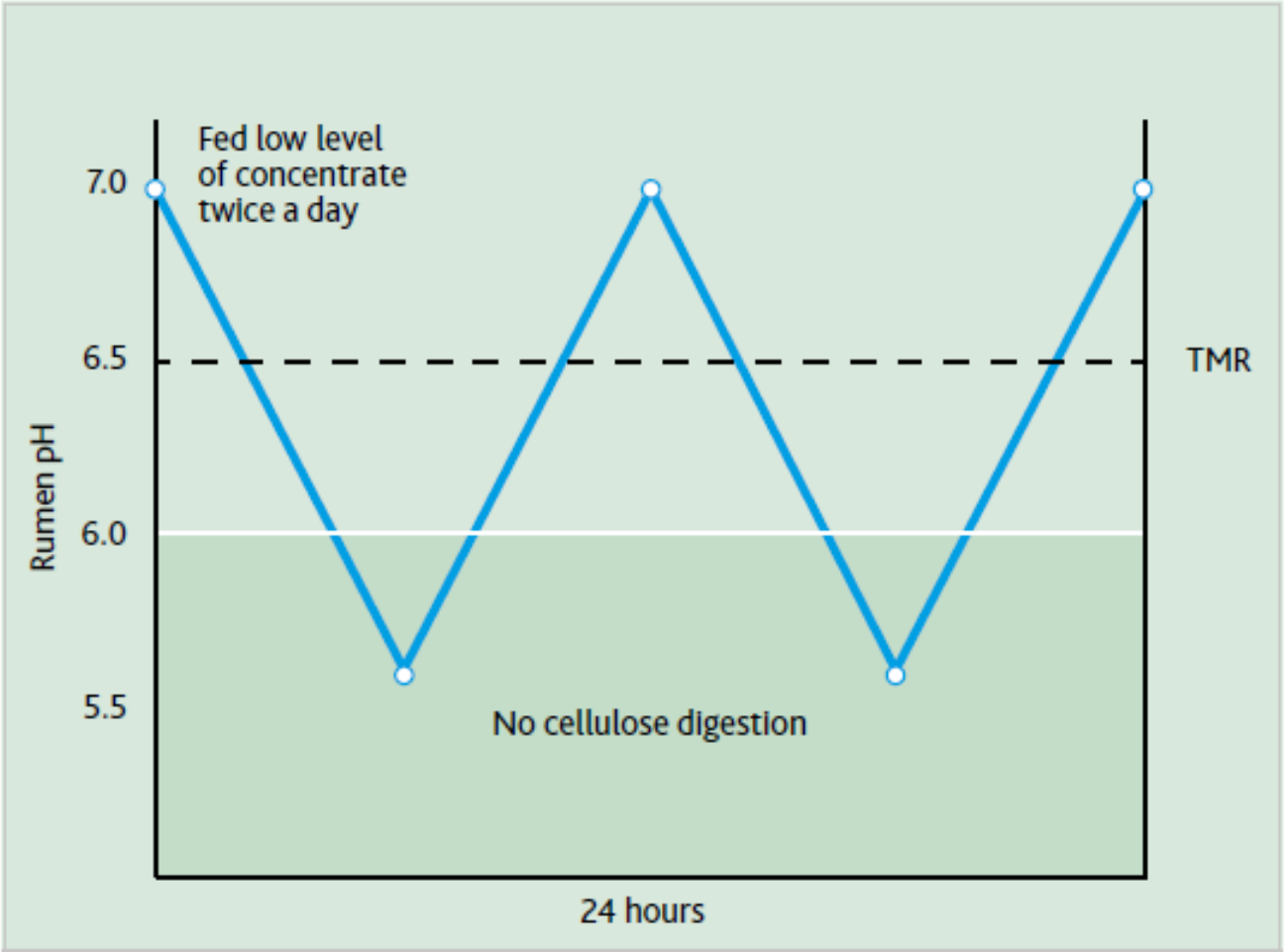
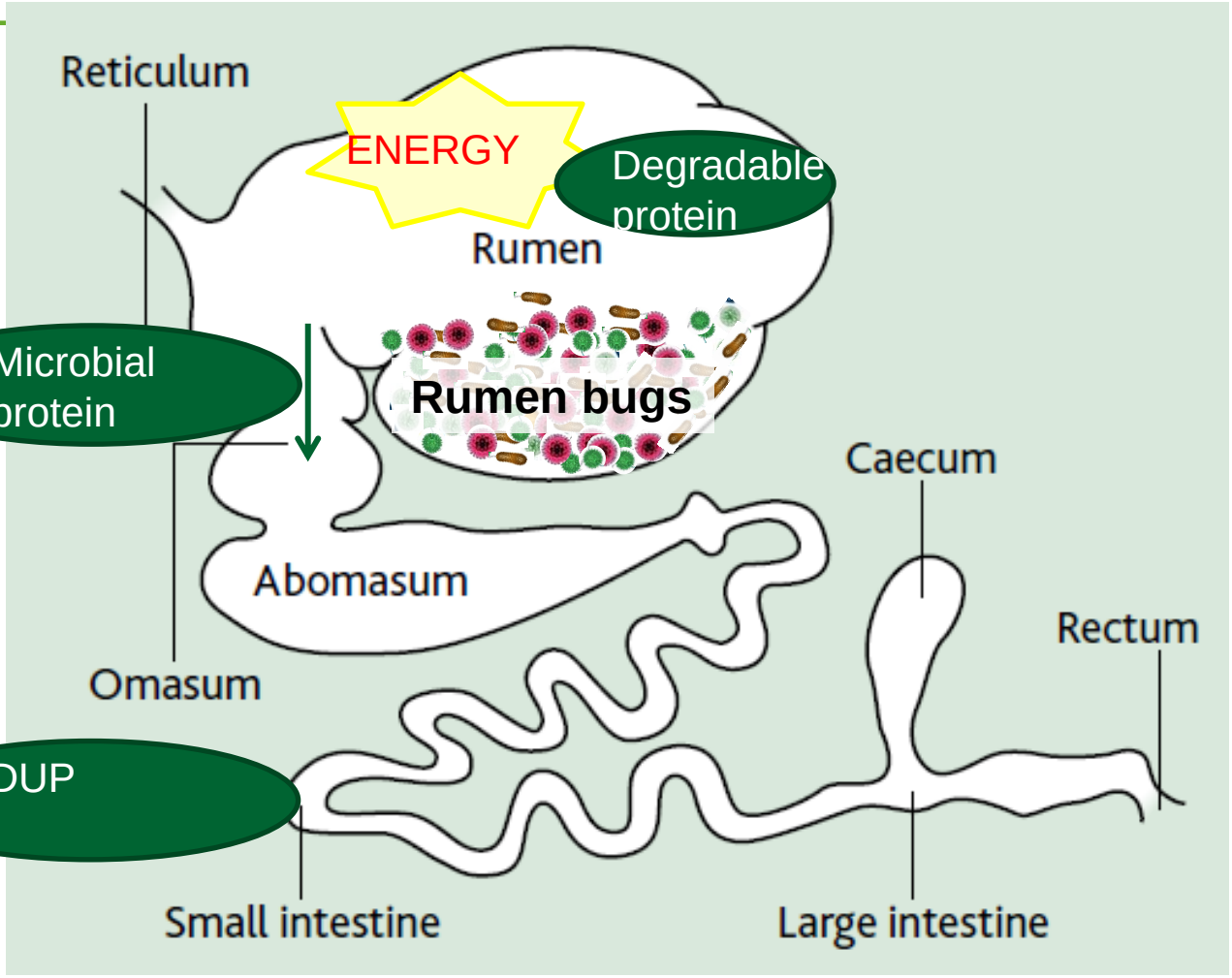


Figure 6. Effect of concentrate feeding on rumen pH (adapted from Orskov)

Protein



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?

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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

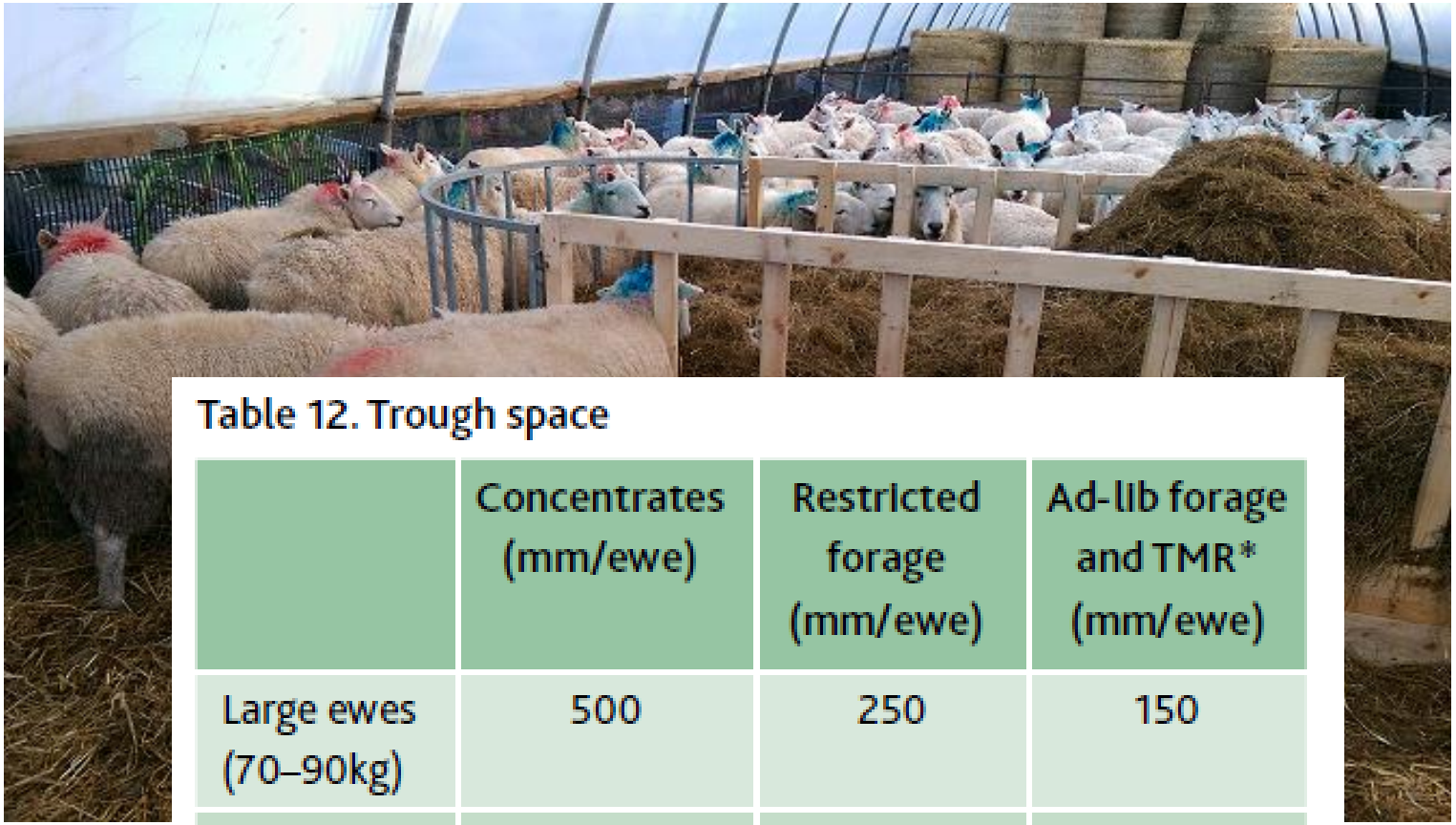


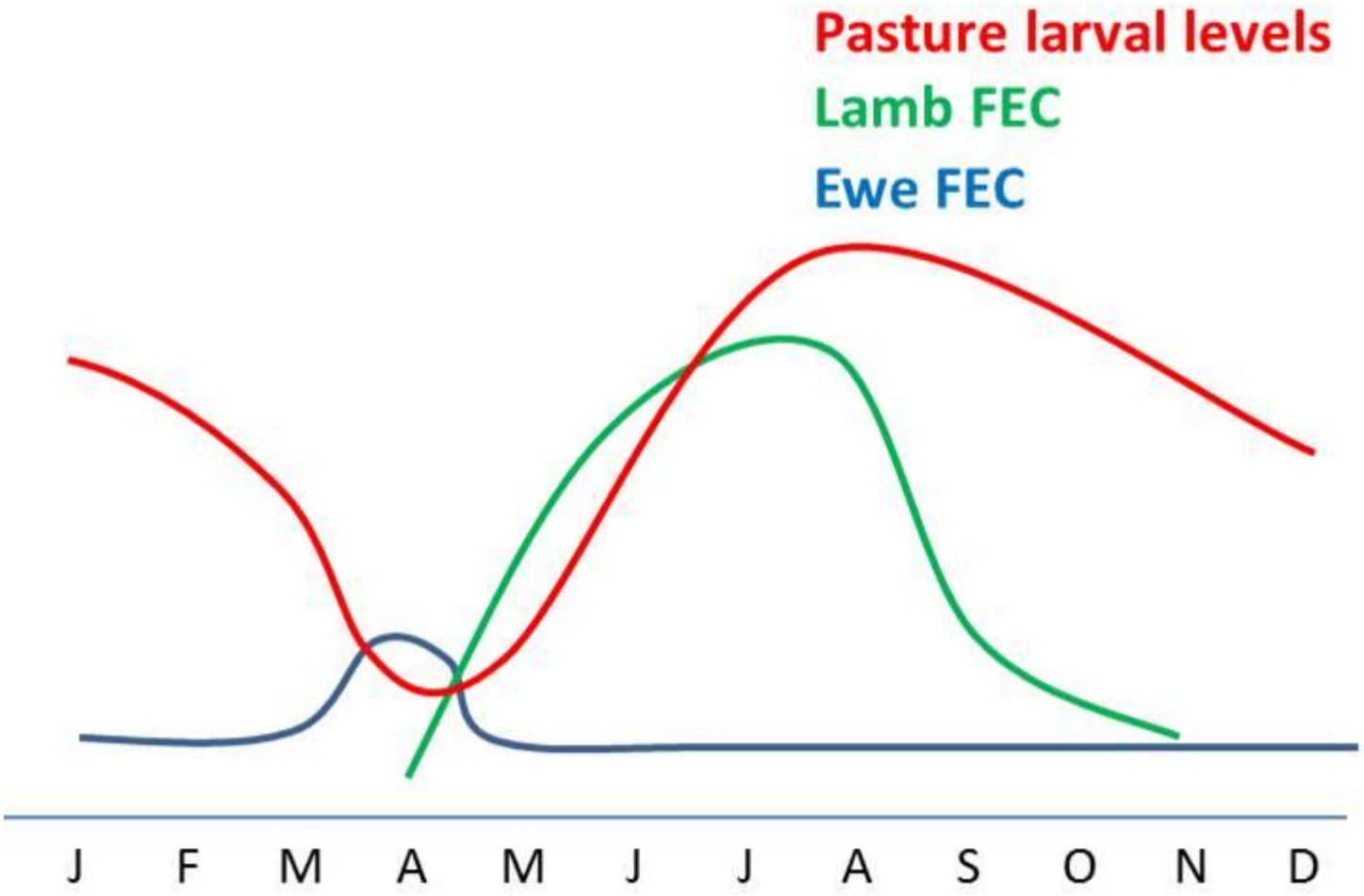
Table 12. Trough space

	Concentrates (mm/ewe)	Restricted forage (mm/ewe)	Ad-lib forage and TMR* (mm/ewe)
Large ewes (70–90kg)	500	250	150
Small ewes (50–70kg)	450	200	150

Notes: *TMR use the same allowance as ad-lib forage.

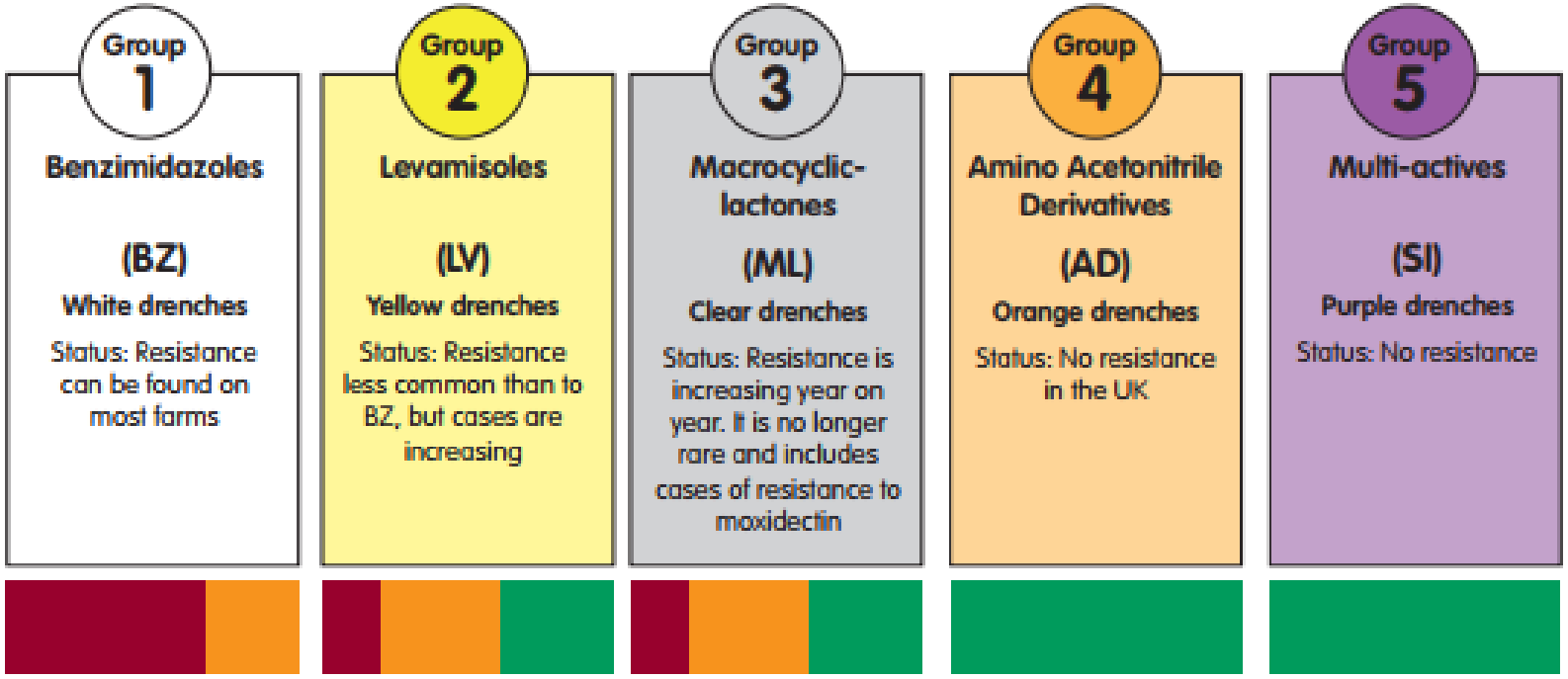
Preventative health measures

Proactive worm control

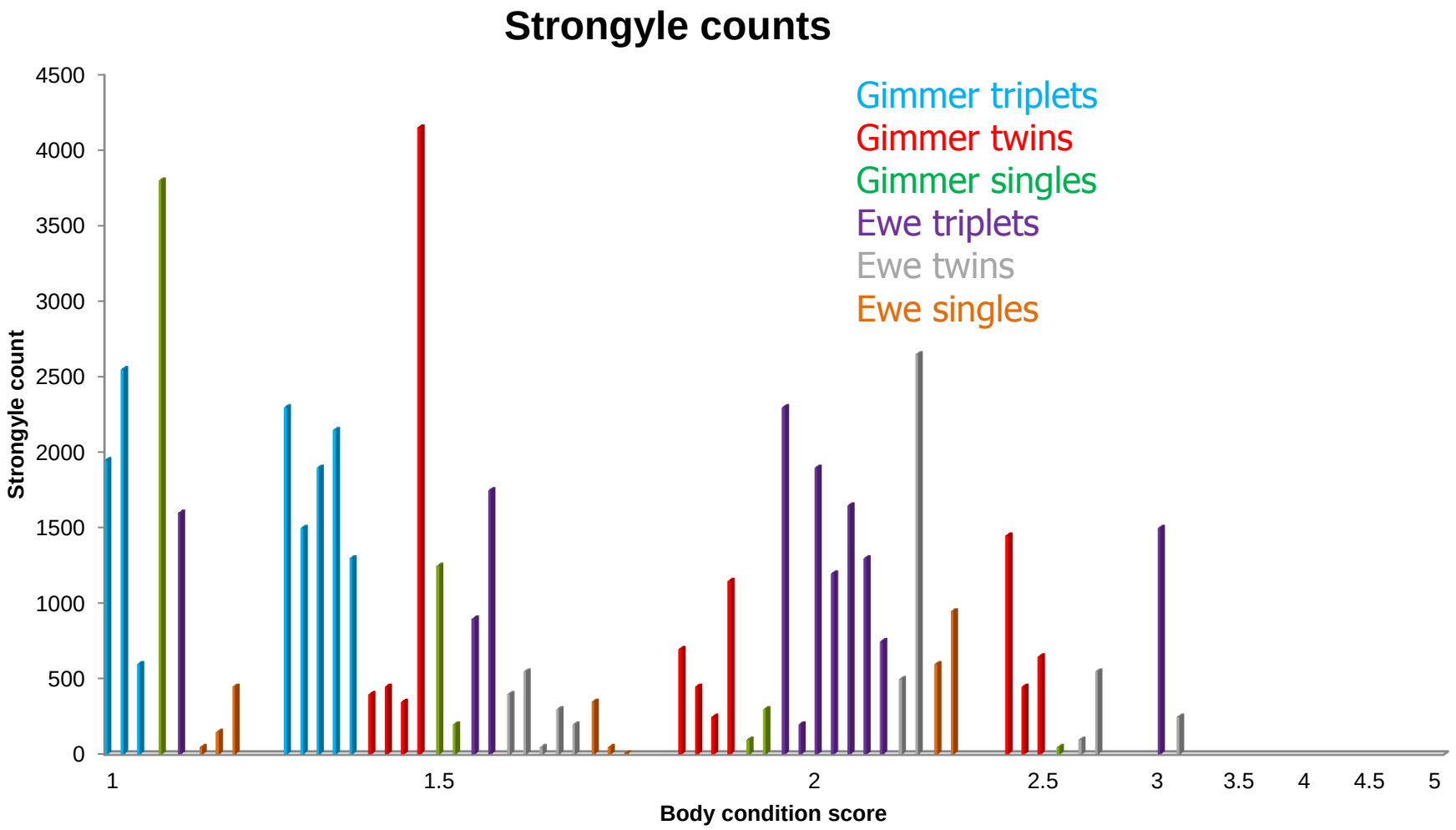


Source: http://www.farmhealthonline.com

The other side of the coin



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

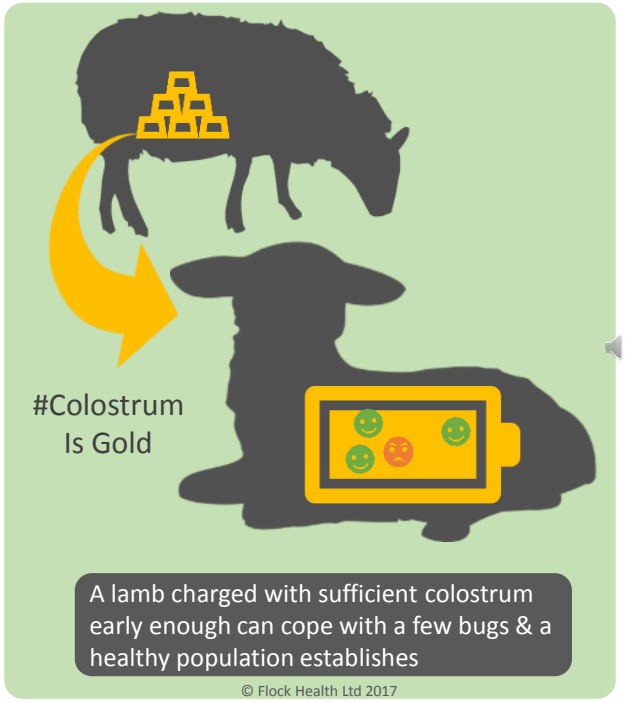

Strongyle counts
Gimmer triplets
Gimmer twins
Gimmer singles
Ewe triplets
Ewe twins
Ewe singles
Strongyle count
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1
1.5
2
2.5
3
3.5
4
4.5
5
Body condition score

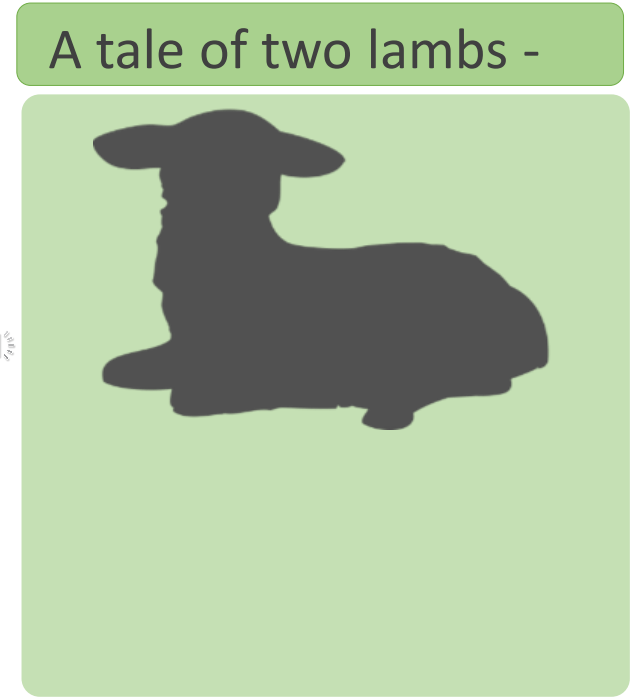
Key message:

Leave a proportion untreated to reduce selection pressure

- Singles
- >CS 3

Antibiotics…





Consider risk

Low risk	Higher risk
Single lambs	Triplets+
Lambs that were born unassisted	Difficult birthing
Sufficient colostrum	Insufficient colostrum/artifical colostrum
Born early in lambing season	Born mid-late in season
Healthy mums on target BCS	Thin, lame, dirty mums
No disease within the season	Disease prevalent

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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

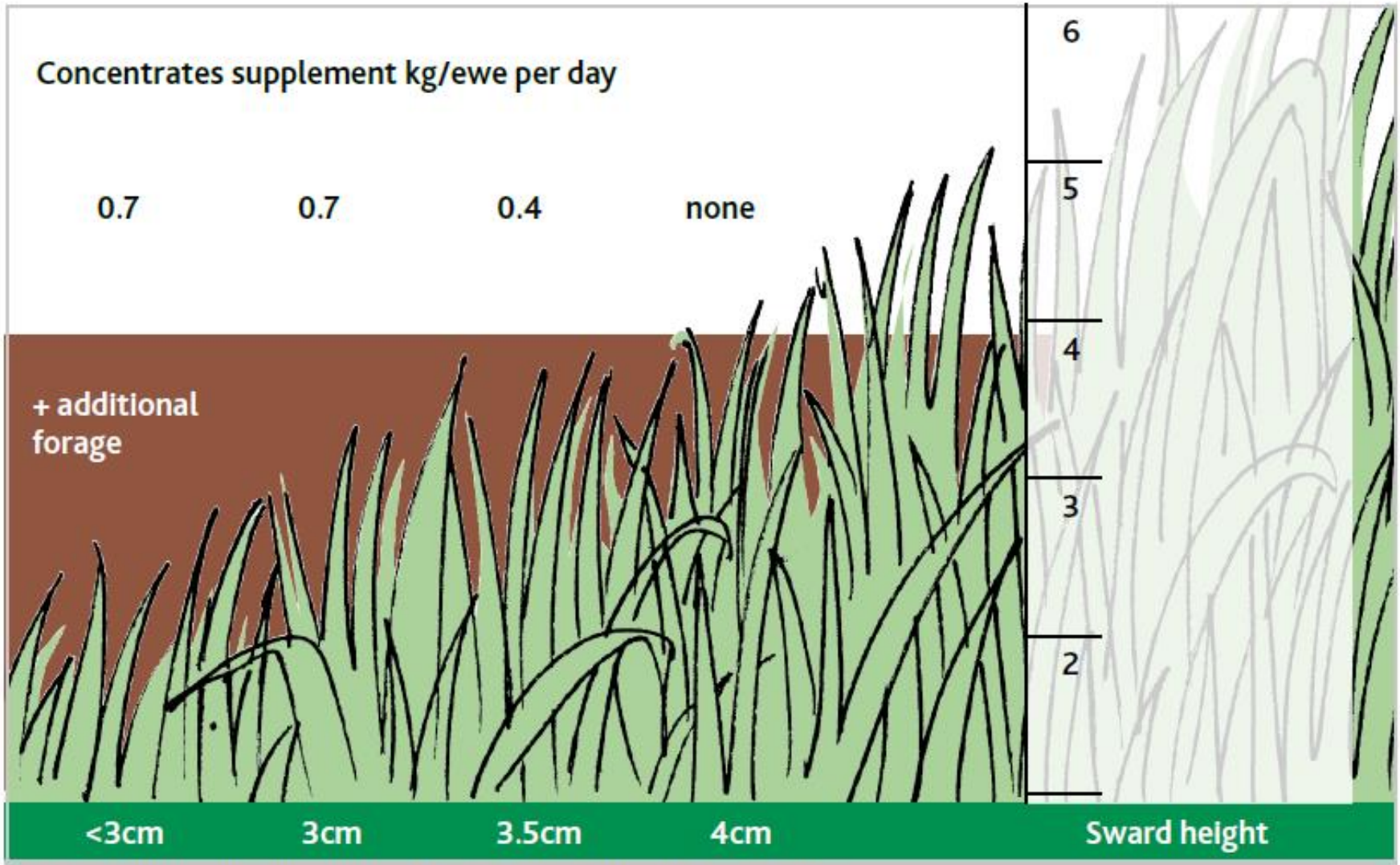

Figure 8. A guide to concentrate supplement feed intake by sward height for twin rearing ewes

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Late lactation

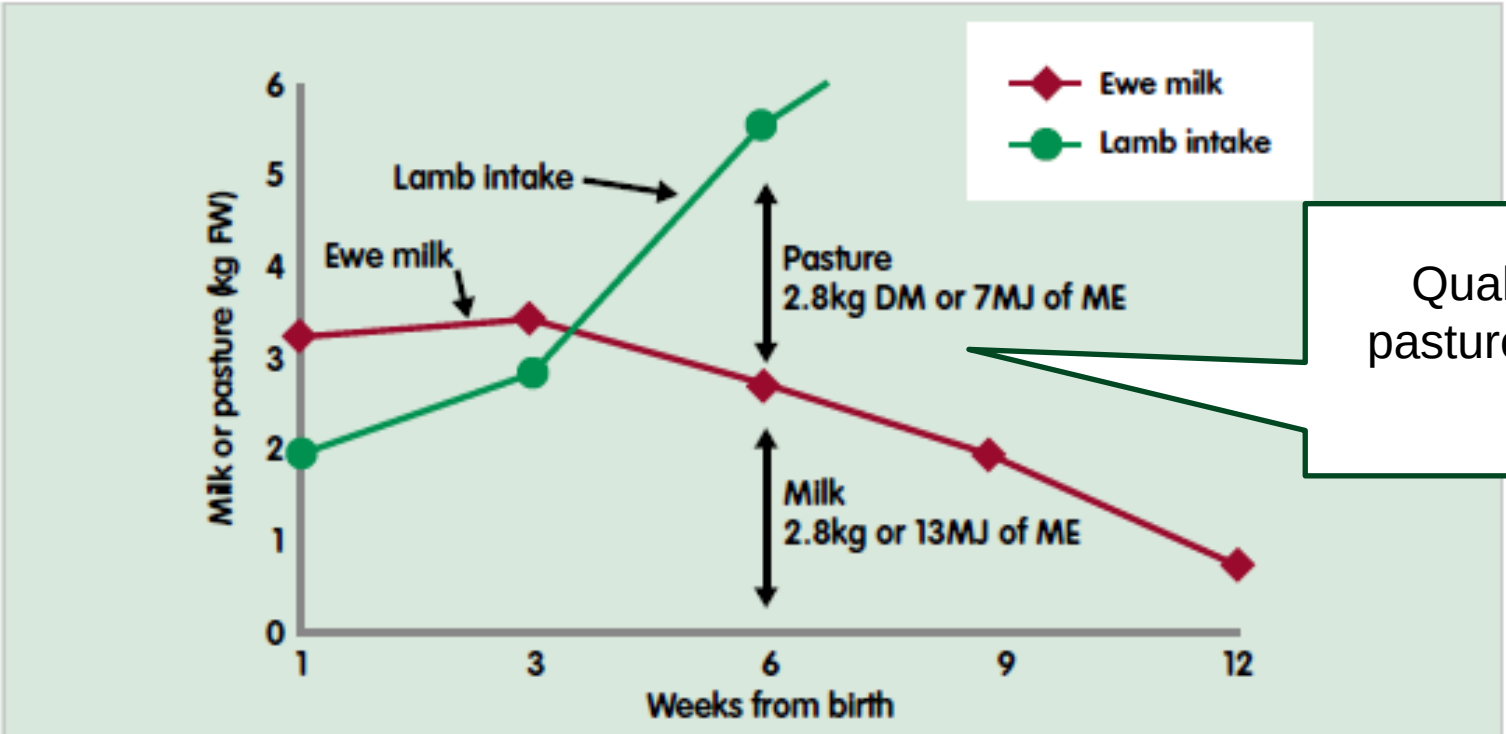

Figure 9. The milk to grass transition for lambs reared as twins (Beef & Lamb NZ)

Notes: See glossary on page 2 for definitions of abbreviations.

Quality and quantity
pasture, forage or cree

From soil to lamb

Optimal Quality