

FEED PLANNING IN A TOUGH WINTER

1 KEY QUESTIONS

- Am I feeding enough today?
- Have I got enough feed for the next three weeks?
- Have I got enough feed for the rest of the winter?

2 WHAT DO MY STOCK NEED?

As a guide, assuming lambing in mid-September, 65 kg mating weight.

For accurate feed demand figures, use the FeedSmart App from Beef + Lamb New Zealand (B+LNZ) and the Red Meat Profit Partnership: www.feedsmart.co.nz

Check out B+LNZ's FeedSmart User Guide available to download on www.beeflambnz.com for more information.

Table 1: Feed Demand

- Rolling hill country, typical pasture (10.8mjme/kgDM).
- These figures are intake, not allowance. Need to allow for utilisation.
- 65 kg ewes, mated 20 April, lambing 15 September.
- 40 kg hoggets mated 10 May.

3 QUALITY OF FEED PRE-LAMB AND PRE-CALVE

- 4-6 weeks out from lambing and calving, ewes and cows need increasing amounts of not just quantity but also quality of feed. Average energy value of feed needs to be lifted and that effect can generally be best met using grain and high quality grass.
- Magnesium and calcium supplements at 5 g/sheep/ day and 50 g/cow/day (CausMag or Lime) maybe fed to pregnant ewes and cows on hard feed in the last four weeks of pregnancy. There is a danger of magnesium/calcium deficiency on green feed cereals and quick regrowth short grass.
- Don't forget about normal animal health treatments to optimise the value of higher quality feed. The stress animals have been under may warrant earlier drench treatments.
- If scanning percentages are low (<130%) there may be merit in keeping singles and twins together to reduce the numbers of mobs.
- The largest gain from differential feeding occurs in the last four weeks pre lamb.

kgDM/hd/d	Maintenance	July	Aug	Sept	Oct
Ewe - single	0.95	0.95	1.2	1.5	2.7
Ewe - twin	0.95	0.95	1.3	1.8	4.1
Ewe - triplet	0.95	0.95	1.4	2.0	4.1
Hogget - mated	0.9	0.9	0.9	1.35	2.0
Hogget - dry	0.9	0.9	1.0	1.05	1.05
R1 Cattle	4.1	5.4	5.5	5.6	5.7
R2 cattle - 450 kg	5.4	7	7.1	7.2	7.3
Beef cows - in calf	5.8	6	6	6.6	7
Hinds	2.4	2.4	2.4	2.6	2.6
Weaner deer	2	2	2.6	4	4
R2 stags	3	3	4	4.5	4.5

4 HOW MUCH FEED DO I HAVE?

Assessing yields of Greenfeed crops damaged by snow

- Brassicas - if kale and rape are broken off at ground level they may need to be fed off earlier. If only bent over they will keep growing. Turnips and swedes won't be as badly affected; only a small part of the yield is in the leaf but watch for rot developing in the bulb. Assess yield on % of damage relative to pre-snow yield. Allow for lower utilisation in mud.
- Cereals - if cereal crops such as oats are flattened and the stem broken, eat them off first. The damaged plants may rot rapidly once exposed to air and sun when snow melts.

4.1 FEED QUANTITY - SUPPLEMENTS

These quantities are intended as a guide only. It is strongly recommended you make your own measurements.

FEED	Typical figures	KgDM
Stack silage	28-35% DM	180-230 kgDM per cubic metre
Silage Wagon		150 kgDM per cubic metre
Hay: Freeman 3 x 4	370 kg-400 @ 85%	310-340 kgDM
Hay: e.g Vicon rounds	350 kg @ 85%	300 kgDM
Baleage, e.g Freeman squares	750 kg bale weight @ 40%	290-330 kgDM
Baleage, e.g Vicon rounds	600 kg @ 40%	240 kgDM

4.2 FEED QUANTITY - GREENFEED

These quantities are intended as a guide only. It is strongly recommended you make your own measurements.

	Typical pre-snow (available)	Typical post-snow (available)
Kale		
- Knee height	5000 kgDM/ha	4000 kgDM/ha
- Hip height	7000 kgDM/ha	5500 kgDM/ha
- Waist height	8000 kgDM/ha	6000 kgDM/ha
Swedes and Turnips		
- Tennis ball	4500 kgDM/ha	4000 kgDM/ha
- Softball	6000 kgDM/ha	5500 kgDM/ha
- Netball	10000 kgDM/ha	9500 kgDM/ha
Greenfeed Oats		
30 cm(knee)	3500 kgDM/ha	1800 kgDM/ha flat and bent 2500 kgDM/ha flat only
Autumn saved grass		
- 10 cm	1500 kgDM/ha	1300 kgDM/ha
- 15 cm	2500 kgDM/ha	2000 kgDM/ha
- 20 cm	4000 kgDM/ha	2500 kgDM/ha

4.3 FEEDING GUIDES

Getting hoggets onto grain:

- Start them on sheep nuts first
- Put on top of silage/hay to increase uptake and utilisation
- Add salt (~1%) if necessary.

Grain feeding:

- 50g/day 2 days
- 100g/day 2 days
- 150g/day 2 days
- 200g/day 2 days
- 250g/day 2 days+
- Once stabilised, you can double up and feed every second day.
- Take shy feeders into separate mobs if necessary.

Pre-lamb ewe feeding in tight feed conditions:

- Singles - 150 g/d advisable in last two to three weeks
- Multiples - up to 300 g/day for the last 20 days pre-lamb (triplets can go higher)

Spring nitrogen response:

- Application when soil temperature reaches
 - » 5°C and climbing Perennial
 - » 4°C and climbing Italian
- Expected response
 - » Hill 10 kgDM/kg N applied for feed budget
 - » Flat 8 kgDM/kg N applied for feed budget
- Response will occur in a period of six weeks after application

5 FEED BUDGET

Step 1: Global feed budget (July-Oct)

- See Appendix I.
- This budget will assist in sorting the overall feed position.
- As a result of this budget, you may need to re-evaluate feed on hand and stock numbers.

Step 2: Mob specific feed budget

- The FeedSmart App can help make these calculations. Check out the User Guide, and the 'how to' videos on our YouTube channel.
- How long will each paddock last?
- Which mob should it be allocated to?
- How much supplement should be added to make the paddock last the required time? (count the number of posts!)
- Decide which classes of stock you can afford weight loss on (e.g. trading stock and beef cows).
- Prioritise paddocks according to quality and lasting ability (especially if required in August).
- Target placement of high quality supplement to get best utilisation
- Grain is best utilised on hard, clean surfaces (ie tracks, fence lines, icy surfaces, on top of silage)

6 PRIORITISING STOCK CLASSES

- If deficit exists, there are only 3 ways of making it work:
 - Sell stock
 - Purchase additional feed
 - Take liveweight off stock. Taking liveweight off capital stock must only be done in a controlled manner, with consistent monitoring of weight movement and/or condition score (Do not reduce ewes to below BCS2).
- BCS2 ewes have an easily identifiable backbone (see B+LNZ's Factsheet on Ewe Body Condition Scoring available to download at www.beeflambnz.com).
- If lambing dates are split, ensure that you feed stock differentially based on their lambing or calving start date.

7 SHEARING

- Shearing increases feed demand, and places freshly shorn sheep at risk in bad weather. The risk is greater for sheep in lower BCS.
- Do ewes need to be shorn? (8 month shearings can be deferred).
- If shearing, pre-condition ewes preferably for at least 10 days with grain, so that feeding can be stepped up once shorn.
- Cover combs are essential to reduce risk. Lifters may be needed as well.
- To reduce risk, shear one shed full at a time, with a three day gap between.

Additional Information (available to download at beeflambnz.com)

Beef + Lamb New Zealand's:

- "A Guide to Feed Planning for Sheep Farmers"
- FeedSmart App User guide
- Factsheet: Snow Guidelines
- Body Condition Scoring guides, for ewes and cows

For further information freephone Beef + Lamb New Zealand on 0800 BEEFLAMB (0800 233 352), email enquiries@beeflambnz.com or visit www.beeflambnz.com.

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APPENDIX I: FEED BUDGET

Table A: Supplements on hand

Supplement type	Comments	Tonnes/Units	Kg wet weight	%DM ¹	Utilisation	Total supply from supplements kgDM (S1)
<i>Example: Baleage</i>	<i>500 kg bales</i>	<i>450 bales</i>	<i>225000</i>	<i>35%</i>	<i>80%</i>	<i>63000</i>
<i>Example: Silage</i>	<i>Cubic metre</i>	<i>1150</i>	<i>1150000</i>	<i>22%</i>	<i>80%</i>	<i>202400</i>
<i>Example: Grain/nuts</i>	<i>Tonnes</i>	<i>35</i>	<i>35000</i>	<i>85%</i>	<i>80%</i>	<i>23800</i>
Pit silage	Cubic metres					
Baleage	Bales					
Grain	Tonnes					
Nuts	Tonnes/Bags					
Hay	Bales					
Straw	Bales					
		Total of Column S1 = Supply from supplements:				

¹Check Appendix II for guidelines. We strongly recommend carrying out your own weight, quality and DM% testing on hay, silage and baleage.

APPENDIX I continued...

Table B: Pastures and crops

Crop/Pasture	Area (ha)	Assessed Yield/Cover	Utilisation	Total Supply from Crops and Pasture kgDM (S2)
<i>Kale paddock 1</i>	5	12500	80%	50000
<i>Kale paddock 2</i>	4	9000	80%	
<i>Italian and turnips</i>	12	5500	80%	
<i>Pasture area 1</i>	200	950	80%	
<i>Pasture area 2</i>	65	1400	80%	
		Total of Column S2 = Supply from pastures and crops:		

B+LNZ recommend you carry out your own assessment of yield and area for each crop.

Table C: Feed Demand

FEED DEMAND: D= Demand										
Months	August			Sept			Oct			TOTALS
Columns	A	B	C	A	B	C	A	B	C	D=Demand
StockClass	No.	kgDM/hd/day	Total per month A*B*Days	No.	kgDM/hd/day	Total per month A*B*Days	No.	kgDM/hd/day	Total per month A*B*Days	Total of Column C's
<i>Example (Ewes - twin)</i>	1000	1.2	37200	1000	1.5	45000	1000	2.7	83700	165900
Ewes (single)										
Ewes (twin)										
Ewes (triplet)										
Hoggets (mated)										
Hoggets (dry)										
R1 cattle										
R2 cattle 450kg										
Beef cows (In calf)										
Dairy cows										
Hinds										
Wnr deer										
R2 year stags										

Total of Column D = Total Demand

FEED BUDGET SUMMARY	Amount (kgDM)
Column S1:	
Plus Column S2:	
Equals Total Supply	
Minus Total of Column D - Total Demand	
Equals Surplus(Deficit)	

Columns (S1 + S2) - Column D = Surplus/Deficit

APPENDIX II

In the following table some common feeds have been compared on both a relative price per kilogram as well as per megajoule of energy. In each case the price of the feed is in a per tonne basis. Depending on the source of the feed and transport costs, adjustments will need to be made for each different situation.

TABLE 1: FEED VALUE OF COMMON FEEDS

Feedstuff	DM%	Relativity to leafy pasture	MJME/KgDM	%Crude Protein (DMbasis)	Price/ton Wet ¹	Cents/kgDM	Cents/MJME
Pasture							
Short leafy	15%	1.10	11.7	27%			
Medium leafy	18%	1.00	10.8	21%			
Dry stalk	28%	0.80	8.1	10%			
Hay							
Good quality	85%	0.80	8.4	12%	\$150	17.6	2.1
Poor quality	85%	0.70	7.3	12%	\$120	14.1	1.9
Lucerne	85%	0.80	9.0	17%	\$180	21.1	2.3
Baleage*							
Grass							
- Good	40%	0.90	10.0	14%	\$120	30.0	3.0
- Poor	35%	0.80	7.5	10%	\$105	30.0	4.0
Lucerne	45%	0.95	10.3	20%	\$150	40.0	3.2
Pit Silage	15-20%	0.9	8.4-10	10-15%			
Straw							
Barley	86%	0.70	7.1	5%	\$100	11.6	1.6
Ryegrass	86%	0.70	7.5	6%	\$130	15.1	2.0
Pea Vine	86%	0.93	10.9	14%	\$150	17.4	1.6
Peastraw	86%	0.70	7.2	9%	\$120	13.9	1.9
Grain							
Barley	85%	1.20	13.1	12%	\$260	30.0	2.3
Wheat	86%	1.30	13.5	14%	\$300	34.9	2.6
Nuts	94%	1.11	12.4	14.8%	\$420	44.6	3.6
PKE	90%	1.02	11.0	14%	\$320	35.56	3.2

¹These prices are intended only for illustration purposes. Make sure you use current prices.

- Watch prices per tonne relative to bale prices. We recommend buying by the tonne always.

*A 600 kg bale @ 40% dry matter selling at \$120/T equates to $\$120 / (1000 / 600) = \$72 / \text{bale}$

*A 600 kg bale @ 35% dry matter selling at \$105T equates to $\$105 / (1000 / 600) = \$63 / \text{bale}$

*A 600 kg bale @ 45% dry matter selling at \$150T equates to $\$150 / (1000 / 600) = \$90 / \text{bale}$

- Don't just rely on Dry Matter and ME tests, **visibly assess baleage, straw** etc for wetness, mould, smell and stage of growth at harvest (seedheads reduce ME and protein levels but increase yield).
- Reference figures for other feed types can be found in Beef + Lamb New Zealand's "Guide to Feed Planning for Sheep Farmers" available at www.beeflambnz.com