Feeding ewes consistently in winter

Gerard Hall

Putting together a winter feed budget can be a simple exercise.

It just involves working out how much feed you have on hand and the amount of feed you need to get through to spring.

The difference between the feed you have and the feed you need will determine the likely pasture covers when you spread the ewes out for lambing or set-stock the cows for calving.

At Meat &Wool New Zealand's Southern Sheep and Beef Council's recent Woodland's field day, Gore farm consultant Graham Butcher said there were two sorts of feed budgets.

The first establishes if there will be enough feed available to get through to spring. The second includes more of the detail including the amount of grass on each paddock or block, feed intakes needed each day, and post-grazing residuals. The residuals give the information to work out the number of days or breaks in each paddock.

Adding that they are sometimes under-estimated, Butcher says farmers also need to know accurate stock liveweights because the heavier they are the more feed they need to maintain their weight and body condition score (BCS).

Working out a feed budget and feeding ewes consistently through the winter means they will more readily maintain their BCS. Dropping one BCS in the ewe flock over the winter can be costly. It could result in 6%-10% fewer lambs on the ground, up to 4% more ewe deaths, and lighter lambs at weaning.

The ingredients of a feed budget include knowing paddock sizes, and converting pastures covers, yields of the winter crop, and the amount of silage, baleage or hay in the shed into the common currency – kilograms of drymatter (kgDM). Once that is known, it is a relatively simple exercise to work out whether there will be enough feed to get through winter. The feed budgets will also identify the gaps to be plugged.

Butcher suggests a good place to begin is by taking a "global or helicopter view" of pasture covers, preferably late in the summer. This involves taking a stock take of the feed on hand (table 1). Then establish the target May 1 or pre-winter average pasture cover across the farm that is needed to feed all stock to requirements so that they get through to spring in optimum BCS.

Assuming all the 15ha of crop and supplement is fed, this example suggests pasture covers across the 180ha when the ewes are spread out for lambing will most likely be about 1425kg DM/ha.

To make this feed budget work, Butcher suggests a May 1 cover of no less than 1600kg DM/ha. If the May 1 cover is 1400kg DM/ha then the cover out the other side will be 1225kg DM/ha, 200kg DM/ha less.

Then the question becomes will spreading the ewes out on 1425kg DM/ha covers at lambing be okay? Butcher says this will depend on your lambing date and when you expect to get spring growth.

"If lambing coincides with spring growth, then a 1425kg DM cover is good, but the greater the gap in the dates then the more cover you need to carry the stock until growth kicks in."

When calculating, remember that when stock are moving on their winter rotations only about half of the grass grown over winter is available. The other half is growing behind them. This is shown in Table 1.

Feed utilisation for crops and supplements, and the amount wasted when they are fed out, also needs to be considered. Generally when putting together a feed budget about 15% of a winter feed crop, baleage and silage is allowed as wastage. The actual amount will vary from farm to farm and often day-to-day depending on such factors as how the crop is fed, the weather and conditions underfoot.

For grass, a utilisation figure can be used, but in practice Butcher says most farmers generally assume that little grass is wasted during winter.

"When it's wet underfoot for extended periods you could drop it back to 85%, but often the grass that is pushed into the mud will stand up again."

table 1: example of simple feed budget from May 1 to spreading out ewes on September 10 – 13 days

		Kg/DM
Feed on hand		
	180ha average cover 1600kg DM	288,000
	180ha winter growth rate 5kg DM/day (50% available)	59,850
	15ha crop @ 11,000kg DM, 85% utilisation	140,250
	120bales balage@220kg DM, 85% utilisation	22,440
	50% of winter growth	90,000
	Total feed available	**600,540**
Feed required		
	Ewes	200,000
	Pre-lamb lift	15,000
	Hoggets	56,000
	Calves	73,000
	Total feed required	**344,000**
	Feed left over	**256,540**
	Pasture cover at set stocking for lambing	**1425**

Winter feed budget will pay off handsomely

Gore-based farm consultant Graham Butcher offered some useful feed budgeting tips at the recent Woodlands field day.

Many farmers do feed budgets in their heads, but for some putting it down on paper is helpful.

With feed tighter going into this winter in most of the country than it was at this time last year, spending a few hours putting a winter feed budget together will pay off handsomely.

Butcher's advice is to take a day out to assess the amount of feed on enough paddocks to last each ewe and hogget mob through to scanning. The same exercise can be carried out on the paddocks that will be grazed from pregnancy scanning through to the time ewes will be set-stocked for lambing.

Farmers need to know mob sizes, how they want to feed them, paddock sizes, grass covers in each paddock and allow for a realistic residual after grazing.

Ideally this sort of budget is suited to a spreadsheet. For those who are not computer savvy, Butcher suggests having a yarn with their children and learn how to. "It's a good practical project."

Then pick a fine day and get out and measure the covers (kgDM) on each paddock that will be grazed as part of the winter round. Remember as ewe intakes are increased as they near lambing the post-grazing residuals also have to be increased. In the last month before lambing, twinning ewes require an intake of 2kg DM/day. This compares to about 1.2kg DM/day they need in the early part of winter through to pregnancy scanning.

Early in the rotation Butcher says a farmer can round up the number of days spent in a paddock or on a break up. As winter progresses and lambing nears he suggests they be rounded downwards.

Of course adjustments will be made on the way through; each year will be different. There will be unders and overs, with a day or two gained here and there during a good spell of weather. Likewise a spell of bad weather might result in losing a few days.

table 2

Paddock	Area (ha)	Cover kg DM/ha July 11	Intake kg DM/ ewe/day	Grass growth	Residual	Available DM	Days in paddock	Actual days in paddock
1	8.84	1750	1.2	5	600	10387	5.4	6
2	8.01	1293	1.2	5	600	5991	3.1	3
3	4.18	3200	1.2	5	600	11429	6.0	6
4	4.89	2970	1.2	5	600	12078	6.3	
5	5.05	2750	1.2	5	600	11514	3.9	4
6	4.53	2700	1.3	5	700	9717	4.0	4
7	5.45	2190	1.4	5	700	9047	4.0	4
8	3.80	2259	1.4	5	700	6608	3.0	3
9	6.00	1950	1.4	5	700	8040	3.6	3
10	5.20	1580	1.5	5	800	5148	2.1	2
11	5.00	1890	1.5	5	800	6600	2.8	2
12	5.54	2402	1.5	5	800	9651	4.0	4
13	5.0	2840	1.6	5	800	11938	4.5	4
14	7.93	2282	2.0	5	900	13180	4.1	4
15								1
16								1
17								1
18								1

Table two is an example feed budget. From July 13, post-pregnancy scanning for 1600 ewes, twinning ewes that will be set-stocked for lambing on September 10. The last four days are one day a paddock. If not grazed they could be used for set-stocking.

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