Food on offer

Equation for calculating Kg DM/ha from a sown crop:

Row technique
= grams per 1m row x 100 ÷ row spacing (cm) x 10 x DM% = kg DM/ha

	Paddock 1	**Paddock 2**	**Paddock 3**	**Paddock 4**
Crop / Pasture				
Technique				
Sample 1				
Sample 2				
Sample 3				
Sample 4				
Sample 5				
Sample 6				
Sample 7				
Sample 8				
Sample 9				
Sample 10				
Total weight (g)				
Average				
DM%				
Row spacing				
Kg DM/ha				

Note: for pastures use the following equation to calculate kg DM/ha

0.1 m^2 Quadrat technique = grams in 0.1m^2 quadrat x 100 x DM%

Feed Budget - *Calculate stocking density*

(number of sheep or cattle required)

	Paddock / Date	*Example*			
A	Food On Offer (kg DM/ha)				
B	DM after grazing (kg DM/ha)				
C	Crop / pasture growth rate (kg/ha/day)				
D	Days of grazing				
(A-B)+(CxD) =E	**Total feed available (kg DM/ha)**				
F	Stock class & DSE rating				
1 kg x F x D = G	**Total Feed intake (kg DM /head)**				
E÷G	**Stocking Density (animals /ha)**				

Estimated crop growth rates

Feed on offer (kg DM/ha)	Growth (kg Dm/ha/day)
300	5-10
500	10-20
800	30-40
1200	40-50

Feed Budget - *Calculate available grazing period*

	Paddock	*Example*			
A	Food on offer - start of grazing (kg DM/ha)				
B	DM after grazing (kg DM/ha)				
A-B = **C**	**Total Feed available (kg DM/ha)**				
D	Stock class and DSE rating				
E	Stocking density (animals /ha)				
1 kg x D x E = **F**	Daily feed intake (kg DM/ha/day)				
G	Crop /pasture growth rate (kg DM /ha/day)				
F - G = **H**	**Rate of Crop / pasture decline (kg DM/ha/day)**				
C ÷ H	**Grazing days**				

Dry sheet equivalent (DSE) rating for different classes of livestock

Sheep

Class of livestock	Bodyweight (kg)				
	40	50	60	70	80
Dry sheep	0.9	1.1	1.2	1.3	1.4
Pregnant ewes, last month					
- singles	1.2	1.4	1.6	1.8	2.0
- twins	1.4	1.6	1.9	2.2	2.5
Lactating ewes					
- singles (100%)	2.6	2.7	2.9	3.1	3.3
- twins (200%)	3.7	3.9	4.4	4.9	5.4
Weaned lambs					
- Merino 20 kg	0.6 – 1.0 depending on desired rate of liveweight gain				
- X bred 30 -40 kg	1.0 – 1.5 depending on desired rate of liveweight gain				

Source: Prograze

Growing lambs

Live weight	Growth (g/day)			
Kg	50	100	150	300
20	0.6	0.8	1.0	1.4
30	0.9	1.1	1.3	1.7
40	1.0	1.3	1.5	2.0

Cattle DSE Ratings
Source: Prograze

Breeding Cattle

Live Weight (kg)	Pregnant	Lactating Early (0-3 months)	Lactating Late (3-9 months)	Average DSE/year
400	8	13	19	15
500	9	14	21	16
600	11	17	24	19

Growing Cattle

Live weight (kg)	Growth (kg/day)		
	0.5	1.0	1.5
200	7	10	12
300	9.5	12	14
400	12	14	17