



# GRASSLAND FOR SHEEP

## Grass measuring

### How to calculate DM yield (cover)

#### Method 1: Cut and weigh method

A 0.5m x 0.5m quadrat is placed in an area that is representative of the amount of grass in the paddock. Knock water off grass if wet. The grass within the quadrat is cut to between 3.5 and 4cm. The following equation is used to calculate the DM yield in the paddock:

Weight of grass (kg) x DM%  
x 40,000 = kg DM/ha in the  
paddock

**Example:** Grass cut within the quadrat weighs 200g (0.200 kg)  
(Remember to take off the weight of the empty bag)

*Grass DM% = 16% (0.16)*  
*0.200 kg x 0.16 x 40,000*  
*(there are 40,000 quadrat in a hectare)*  
*= 1,280 kg DM/ha*

Written by  
**Dr Philip  
Creighton,**  
Sheep Grassland  
Researcher



*Quadrat and shears.*

#### Estimating grass dry matter (DM)

Continuous rain: 12-15% DM

Mixed sunshine and rain showers/  
second rotation: 14-17% DM

First rotation in spring/drier weather:  
18-19% DM

Over a week of continuous sunshine  
and high temperatures: 20-21% DM

## Method 2: Plate meter

- Take heights across the entire paddock in a 'W' or 'X' pattern to ensure the quantity of grass in the paddock is accurately represented.
- Subtract the ideal post grazing height/residual (e.g., 4cm) from the height of the grass in the paddock.
- Multiply the figure you get by 250 (cattle swards) or 300 (sheep swards) as there is between 250-300kg DM/cm depending on the density of the sward. (Sheep swards are denser than cattle swards.)

### Example

- Paddock height was 8.0cm
- 4.0cm is the desired postgrazing residual

$$(8.0\text{cm} - 4.0\text{cm}) \times 300 \text{ kg DM/cm} \\ = 1,200 \text{ kg DM/ha}$$



Plate meter.

### Guide to estimating pre-grazing yield (kg DM/ha) using sward height

cm	Kg DM/ha
4	150
5	450
6	750
7	1,050
8	1,350
9	1,650
10	1,950

\* Values based on post-grazing height of 3.5cm. Subtract 150kg for every 0.5cm post-grazing height increase.

## Grazing management



*Graze grass tightly in spring.*

### The grassland year: key points

#### Autumn: grass year starts

- Closing from late October
- Swards should be rested for 120 days over winter
- Match autumn closing dates to expected lambing dates to match spring grass supply to demand

#### Spring

- Early nitrogen – apply once soil temperatures rise above 5°C
- Tight grazing (3.5 – 4.0cm March/April) – removes any over winter dead material and ensures high quality leafy regrowth for following rotations

#### Mid-season

- Quality v quantity
- Pre grazing height = 7-9cm (1,000 - 1,500kgDM/ha)
- Leaf = digestibility
- Post grazing height Pre weaning : 4.0-4.5cm
- Post weaning: lambs 5.0-5.5cm  
ewes 4.0-4.5cm

## Grazing infrastructure

### Paddock system/rotational grazing

#### Why?

Control = increased grass utilisation, increased grass growth and increased grass quality

- Rotation grazing - minimum of five paddocks
- Provide high quality leafy grass
- Average residency of five days per paddock

### Practical level

- Average 100-ewe flock SR 10 ewes/ha (4 ewes/ac)
- Five grazing divisions of 2ha (5ac) each
- Can be permanently fenced and each split
  - Or**
  - Boundary set up to allow 5-10 temporary divisions as needed
  - Allows flexibility and control



*Paddock system*



*Temporary sub division using electric fencing*