



Getting on the front foot

Pasture assessment



SFS

Southern Farming Systems

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Assess the state of our pastures

- What sown pastures have survived => planning purposes.
- What weeds are present => whether we need to intervene.
- Developmental stage of our improved species => guides management
- Quantity, Feed on Offer, (FOO)
 - Enough to meet livestock requirements => If stock can be released from containment
 - Use starting FOO for feed budgeting to plan.

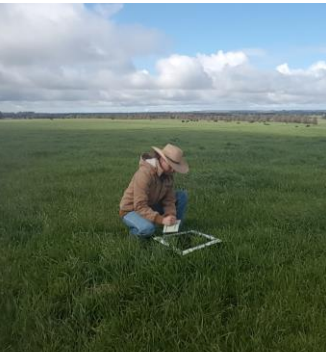
Use some of Pasture Paramedic resources



Green (late winter / early spring)

Late summer/early autumn

Pasture Paramedic YouTube video



What has survived the drought and summer?

Tolerance of pasture species to hot dry summers

	Perennial ryegrass	Phalaris	Cocksfoot	Tall fescue
Hot, dry Summer	X	✓✓	✓	✓✓*

* Summer active fescue has moderate drought tolerance

- May have lost perennial ryegrass.
- Phalaris likely to have survived and will reshoot from dormant underground buds.
- Cocksfoot and Perennial ryegrass can both recruit seedlings after the autumn break, generally from seed set in the previous year.



Assessing what has survived the drought and summer?

- Assess by counting the number of live sown perennial grasses.
- Assessment is easier if there is some green leaf to help with identification of species.



The pinch and pull test



Number of live plants
(photo shows 7)

- Aim for at least 2 phalaris, tall fescue or cocksfoot or 3 perennial ryegrass in the 0.1m² quadrat (square foot).
- Figures comes from having at least 5 phalaris/m² or 10 perennial ryegrass plants/m²

Expect large weed burdens

Weeds favoured by bare ground/low ground cover:

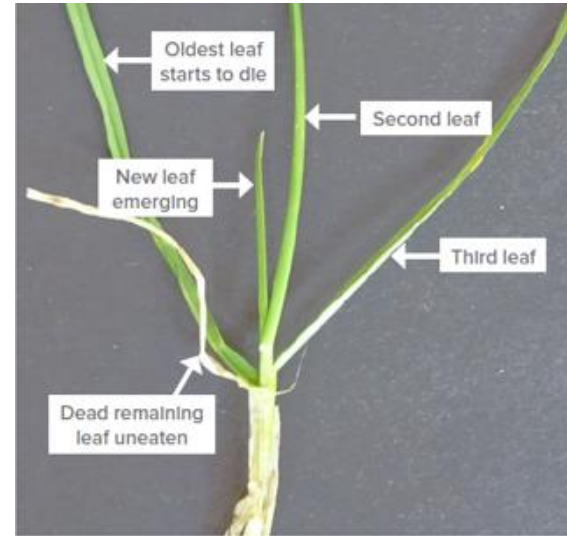
- Broadleaf: capeweed & erodium (short seed life), flatweed (perennial), thistles (long seed life).
- Annual grasses: barley, soft brome grass (short seed life) and winter grass (long seed life).
- Summer weeds: fat hen, clammy goosefoot, wire weed (die out in winter) (long seed life).

Use the Pasture Paramedic manual to help identify weeds.



Checking the development stage of the plants

- Number of live leaves per tiller
- Number of true leaves on clovers



When to graze grasses in autumn

Graze once plant carbohydrate reserves are restored, so at least 2 ½ leaves.

Plants such as cocksfoot are well anchored.

Perennial ryegrass growth cycle

(same concept applies to all perennial grasses)

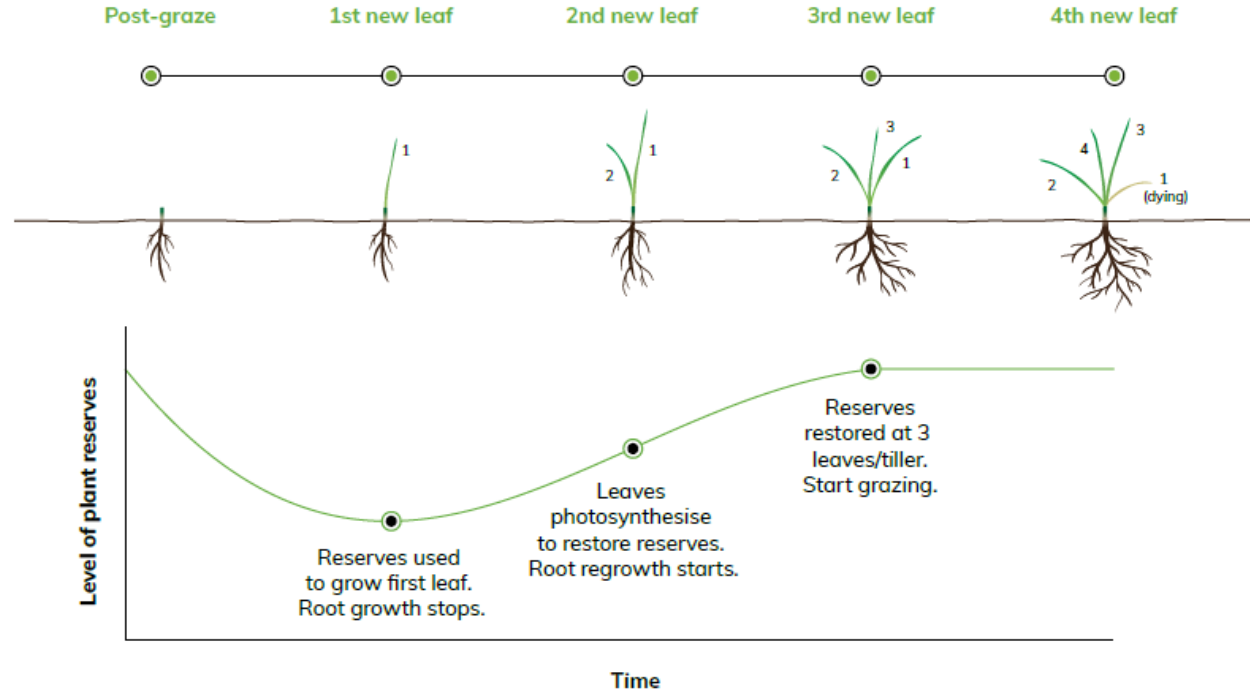


Figure 9. Stylised depiction of perennial ryegrass regrowth after grazing. (Adapted from Fulkerson and Donaghy⁵)

When to graze sub-clover



Actions:

- Ideally wait until the sub has 3 true leaves, this can take 3 to 6 weeks after the break.
- If you can't, wait until at least the spade leaf has formed
- Don't always start a rotation in the same paddock.



Feed on offer

kg Dry matter/ha



How to measure herbage mass?

Measure the height and density of a pasture and estimating dry matter (kg DM/ha), eg stick method.

Other methods involve cutting and drying, plate meters or electronic probes.

Satellites, eg Cibo labs, Australian feed monitor – not reliable in early autumn.

Eyeballing – using visual guides

How to assess FOO - The stick method

Figure 2.1 – Pasture stick

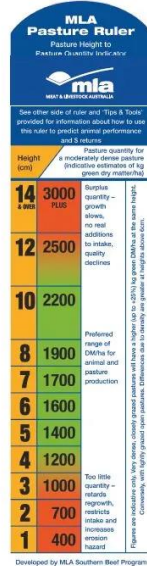
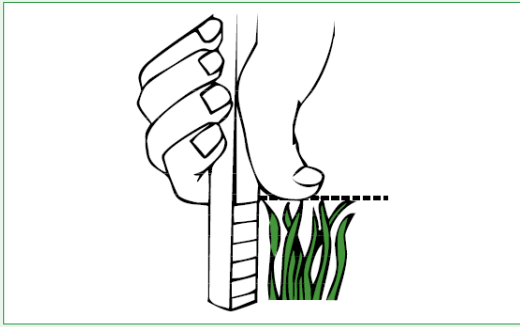


Table 2.1 – Approximate relationship between pasture height and kg green DM/ha

Height (cm)	Lightly grazed 50% green	Mod. grazed 100% green	Dense 100% green
1	250	400	500
2	500	700	800
3	600	1,000	1,100
4	800	1,200	1,400
5	1,000	1,400	1,700
6	1,150	1,600	2,000
7	1,300	1,750	2,300
8	1,450	1,900	2,600
9	1,600	2,000	2,800
10	1,700	2,100	3,000

Cereals e.g. wheat, barley
75
175
275
375
500
625

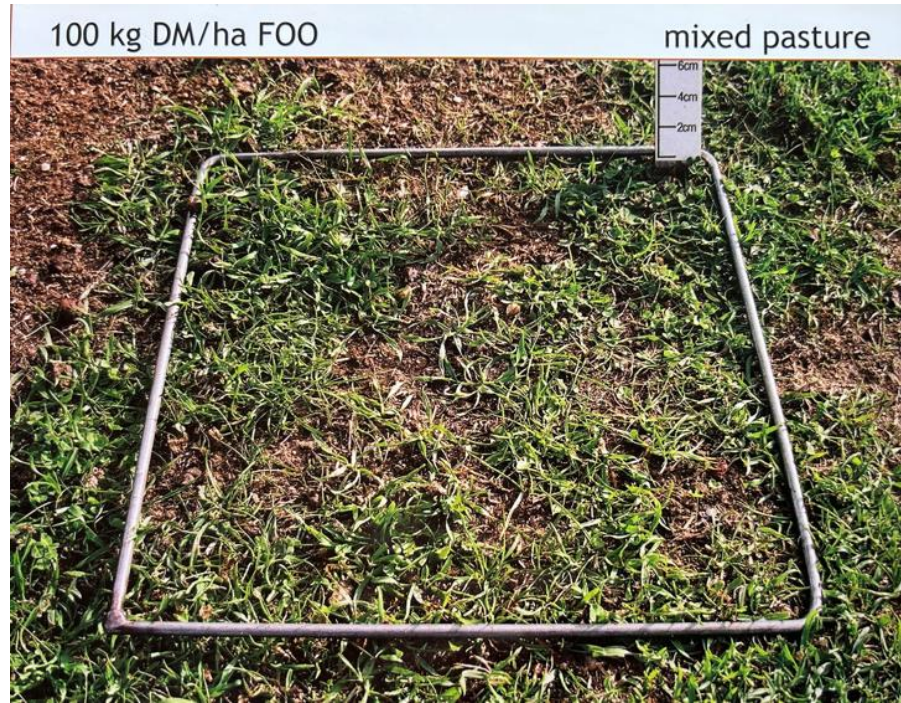
Note: Even though GrazFeed DMs are based on cutting to the ground, it assumes that some dry matter will be left behind as unavailable to animals or clippers. If you cut quadrats so low that you have to sieve

Prograze manual

- Pasture mass tapers off with increasing height because the pasture becomes less dense.
- Don't record the height of plants that stock don't readily eat like onion grass or dead material or stems.
- The relationship only works on green material and so don't use it on dry dead feed.

Visual guides

Lifetime Ewe library – FOO booklets or on website :
<https://www.feedonofferlibrary.com/search/>



Other potential autumn pasture assessments

Assess groundcover



70%



90%

- Targets to avoid erosion and nutrient, soil & seed loss.
- Likely lower than desirable targets.
- Keep stock in containment.
- Build sediment fences at dam inflow areas to protect water quality.



Assessing the seed bank of sub-clover

SEASONAL CONDITIONS (observation required)

Has there been **repeated**:

- poor spring finishes?
- years of false or late autumn breaks?

YES

FURTHER DIAGNOSIS

Search for residual surface and buried burr in the top 1cm at the end of summer and check for plump seeds. Want more than 50 burrs/0.1m².

Oversow additional sub-clover seed and observe its response.

NO

Reference: the rule in/rule out guide of the MLA Factsheet: How do I determine why my sub-clover is underperforming

Watering squares

- Can water plants daily in a 1 metre square area and see what returns (1mm falling on 1 metre = 1 litre). Use a watering can or a water cart to wet up areas inside a gate
- Need to apply about 40 mm over a week, (40 litres).