

Assessing groundcover

Practical monitoring for healthy soils and productive pastures

Groundcover is the protective layer that sits on top of the soil surface. It includes living pasture plants, dry or dead pasture material (such as litter and mulch), biological crusts (including moss and lichen), and rocks and small debris. Groundcover acts like a protective blanket for the soil by reducing erosion, helping rainfall soak into the ground, supporting healthy soil biology, and improving pasture resilience and productivity.

Why maintaining groundcover matters:

Maintaining groundcover is essential for protecting valuable topsoil from wind and water erosion, retaining water and nutrients within the paddock, supporting healthy soil structure and microbial activity, and sustaining long-term pasture productivity. It also helps landholders meet their obligations under the Landscape South Australia Act 2019.

How to assess groundcover:

Quadrat method

A quadrat provides a simple, repeatable way to estimate groundcover across a paddock.

Equipment -

30cm x 30cm quadrat (wire or frame)

Steps

1. Place the quadrat randomly or along a cross-paddock transect to avoid bias.
2. Look directly down into the quadrat.
3. Estimate the percentage of:
 - a. Living plants
 - b. Litter/mulch
 - c. Bare soil
4. Record results for each placement.
5. Repeat 10-20 times per paddock.
6. Calculate the average for the paddock.



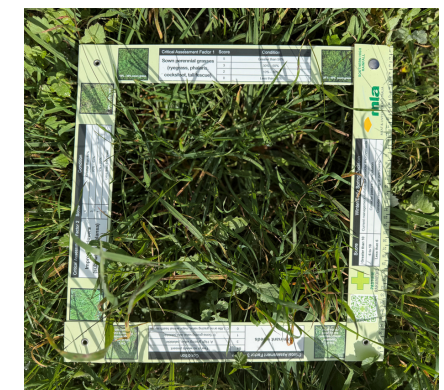
25% groundcover



50% groundcover



75% groundcover



100% groundcover

Target coverage:

- >70% groundcover year round
- 100% groundcover on slopes and fragile soils

Interpreting results

Average groundcover	Erosion risk	Action	To reduce risk
>80%	Low	Continue effective grazing management	Sustain optimal groundcover
70-80%	Low	Monitor groundcover levels regularly	Increase rest periods; retain 80-90% cover on slopes or high-risk areas
50-70%	Medium	Address low groundcover by adjusting grazing pressure; consider seasonal conditions, soil type, improving management practices	Plan for stock removal within 1-2 weeks; reduce stocking rate; protect valuable areas
<50%	High		Remove stock immediately; confine to sacrificial paddock; containment feed; begin recovery plan

Monitoring frequency

Monitor groundcover monthly during high-risk summer and autumn periods, every six to eight weeks during the growing season, and within seven to ten days after major grazing events.

Tips for effecting monitoring

- Use the same quadrat size every time
- Take photos at each monitoring point
- Combine quadrat data with visual groundcover guides
- Map bare patches to track changes over time
- Record seasonal conditions alongside measurements

Act early

Groundcover decline happens gradually. Early action prevents costly recover later. Take action when groundcover drops below 70%, litter levels decline noticeably, pasture height falls below seasonal targets, or stock begin grazing close to the soil surface.

Further resources:

- Meat and Livestock Australia: Assessing Groundcover - <https://bit.ly/4pUrOq9>
- EverGraze.com
- hf.landscape.sa.gov.au/StockContainment



Australian Government

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