Northern Pastures Group

Restoring pastures on the northern tablelands

Producer Demonstration Site Project

Managed by Lu Hogan & Alex Ball

NORTHERN TABLELANDS PASTURE GROUP

GLENRAC

Glen Innes Natural Resources Advisory Committee

mla

MEAT & LIVESTOCK AUSTRALIA

- Spring 2019 – no end in site to the drought
- Low levels of ground cover – erosion risk, loss of soil carbon and biological functioning
- What to do post drought to restore pastures – ground cover, species composition and productivity?
- Project proposal to MLA to demonstrate pasture restoration/re-establishment & the cost/benefit

Rapid turn around early 2020

- Questions still remained about the impact of drought
  - Composition of pastures – quality and productive potential
  - Weed incursion on bare ground
  - Groundcover to protect soils and waterways
  - Cost benefit of pasture improvement strategies

Monitoring pasture restoration at 3 sites

The decision making process for restoring pastures

1. Assess what remains in the paddock
   - Is it good enough to keep and manage back to full productivity?
   - Does it need boosting by over sowing preferred species?
   - Should it be sprayed out and replaced?

Date: 17th May 2021 Paddock: Creek Paddock

Sample No	Sown grasses %	Volunteer Grasses %	Native grasses %	Grass Weeds %	Sown Legume %	Sown Herbs %	Broadleaf Weeds %		Groundcover (%)
1	20	40		10	10		20		80
2									
3									
4									
5									
6									
7									
8									
9									
10									
Total									
%									

The decision making process for restoring pastures

If the decision is to over sow or fully replace

2. Do a soil test

3. Develop an agronomy plan with your advisor
    - Weed and pest control
    - Fallow periods
    - Fertiliser requirements
    - Species selection for sowing
    - Grazing plan

The importance of ground cover

- Groundcover reduces run off and erosion
- More water available for plant growth
- What is groundcover?
  - Anything near the surface that protects soil from raindrops and flow
  - Plant material (dead/alive), rocks, timber, dung
  - Canopy and Contact ground cover
- Loss if unprotected – up to 100t/ha per year (1mm topsoil = 10t/ha loss)
- Minimum ground cover for protection depends on slope, soil type, rainfall amount and intensity

- Upper Hunter – 70% ground cover required for red clay with 10% slope
- Drainage lines and dispersive soils – 100% cover required
- Pasture species selection important

Slope, groundcover and water runoff

25%

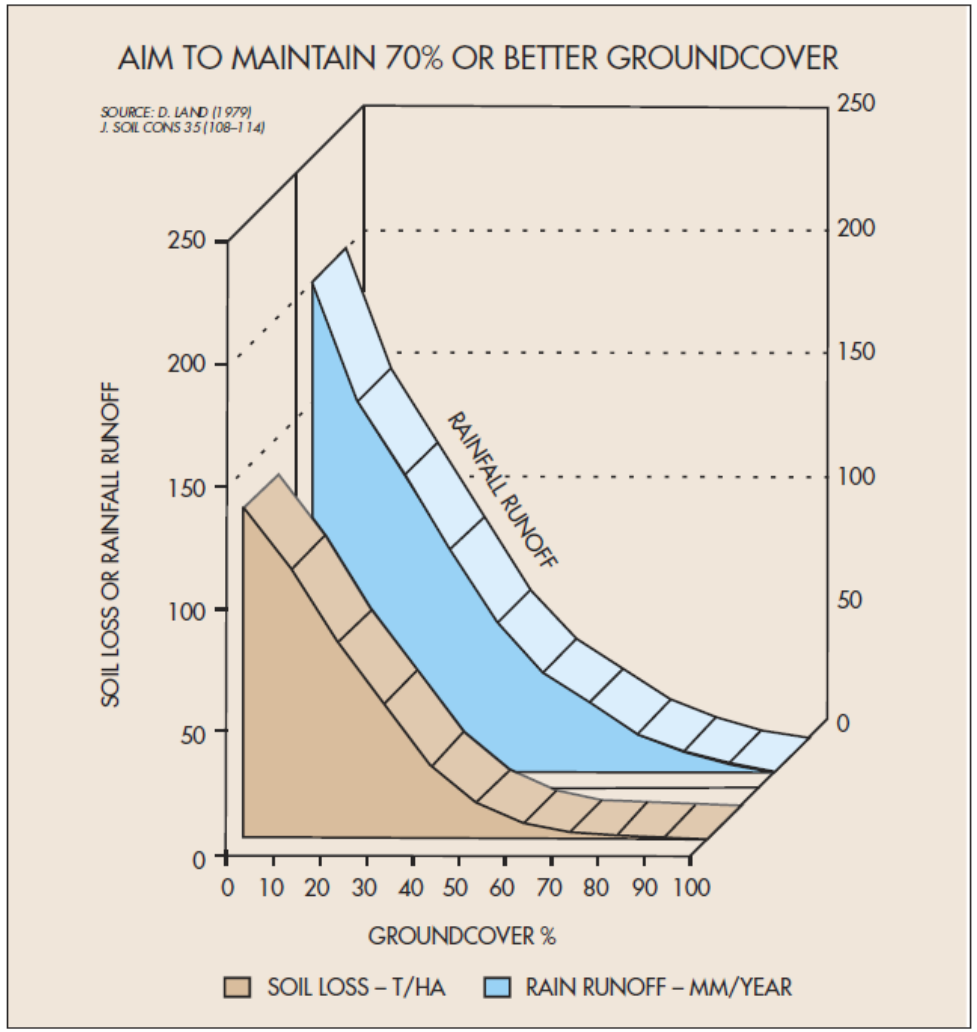
50%

75%

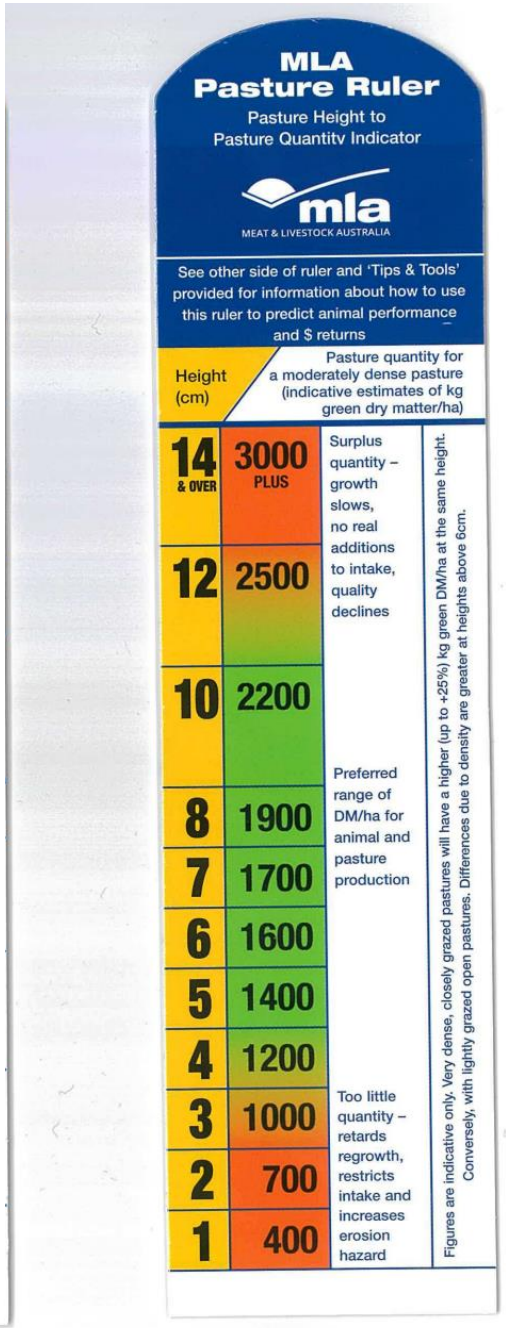
100%

Images: Judi Earl & Lewis Kahn – Pasture & grazing management in the northern tablelands

Figure 1. Effect of groundcover on the amount of soil loss and water run-off from pastures.
(Adapted from Lang 1979)



Source: NSW DPI Agfact P2.1.14



In the paddock
Assessing pasture composition, groundcover and pasture biomass

Date: 17th May 2021 Paddock: Creek Paddock

Sample No	Sown grasses %	Volunteer Grasses %	Native grasses %	Grass Weeds %	Sown Legume %	Sown Herbs %	Broadleaf Weeds %		Groundcover (%)
1	20	40		10	10		20		80
2									
3									
4									
5									
6									
7									
8									
9									
10									
Total									
%									

Project Survey Sheet

- Please fill in sign and return to me
- MLA requirement for the project