

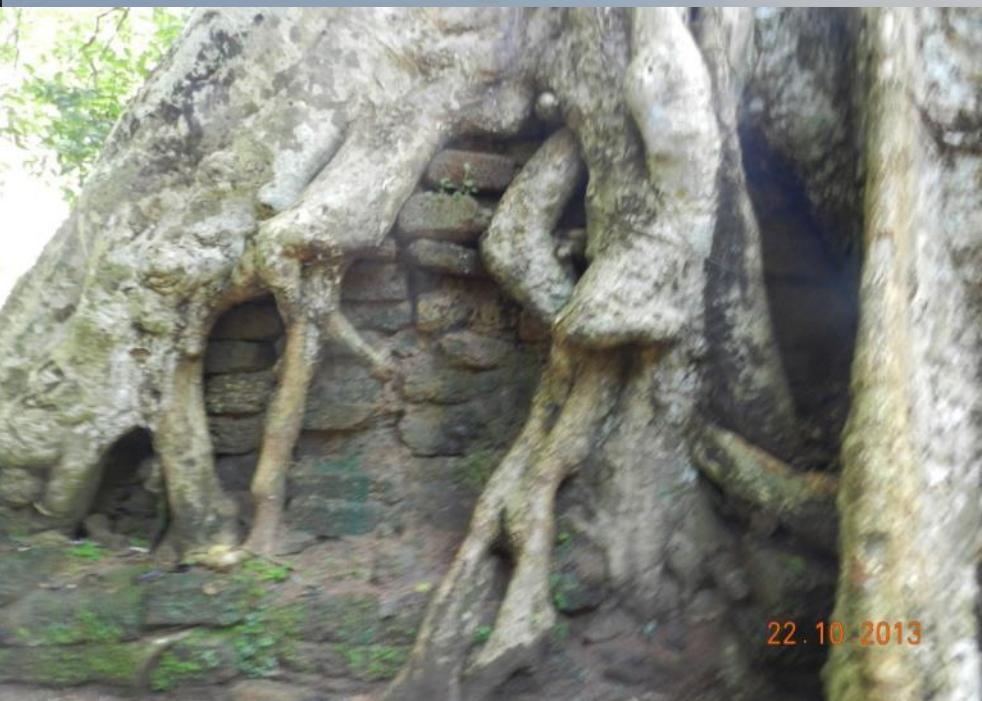


Broad Scale Regeneration of Grasslands and Landscape Function Using Grazing

Graeme Hand



Government of South Australia
Department of Environment,
Water and Natural Resources



Graeme Hand 0418532130
graeme.hand@bigpond.com



22.10.2013



22.10.2013



Graeme Hand 0418532130
graeme.hand@bigpond.com

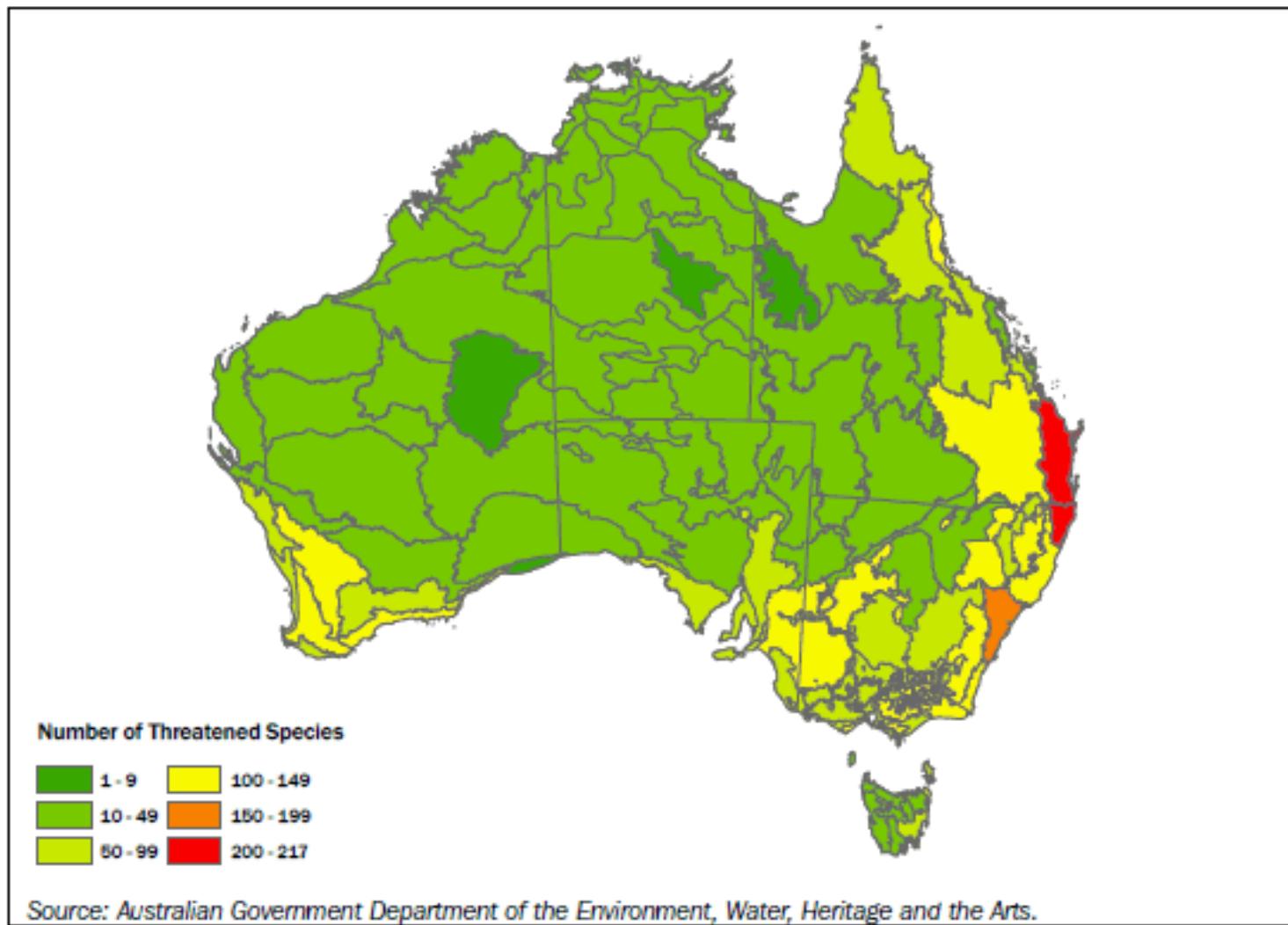


28.10.2013

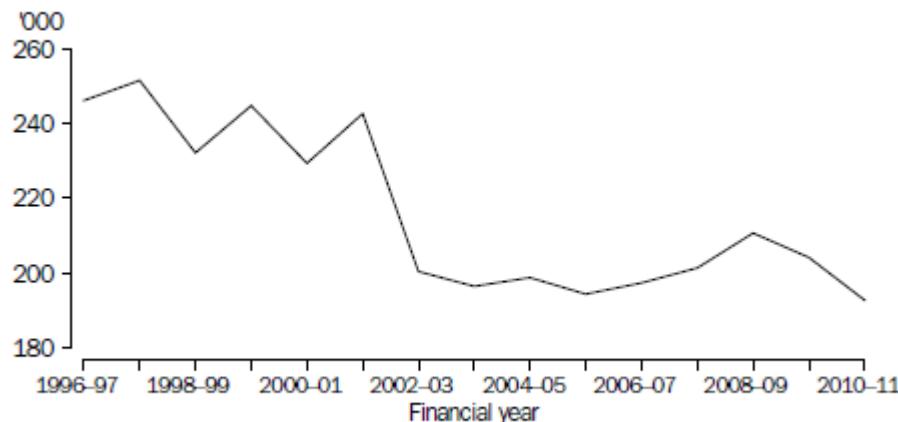


Graeme Hand 0418532130
graeme.hand@bigpond.com

Number of EPBC Act listed taxa by bioregion as at December 2009

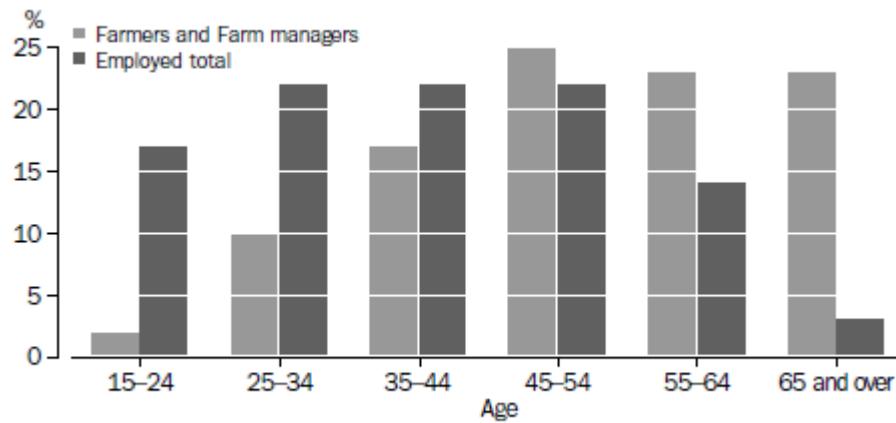


S8.1 FARMERS AND FARM MANAGERS, Employed total

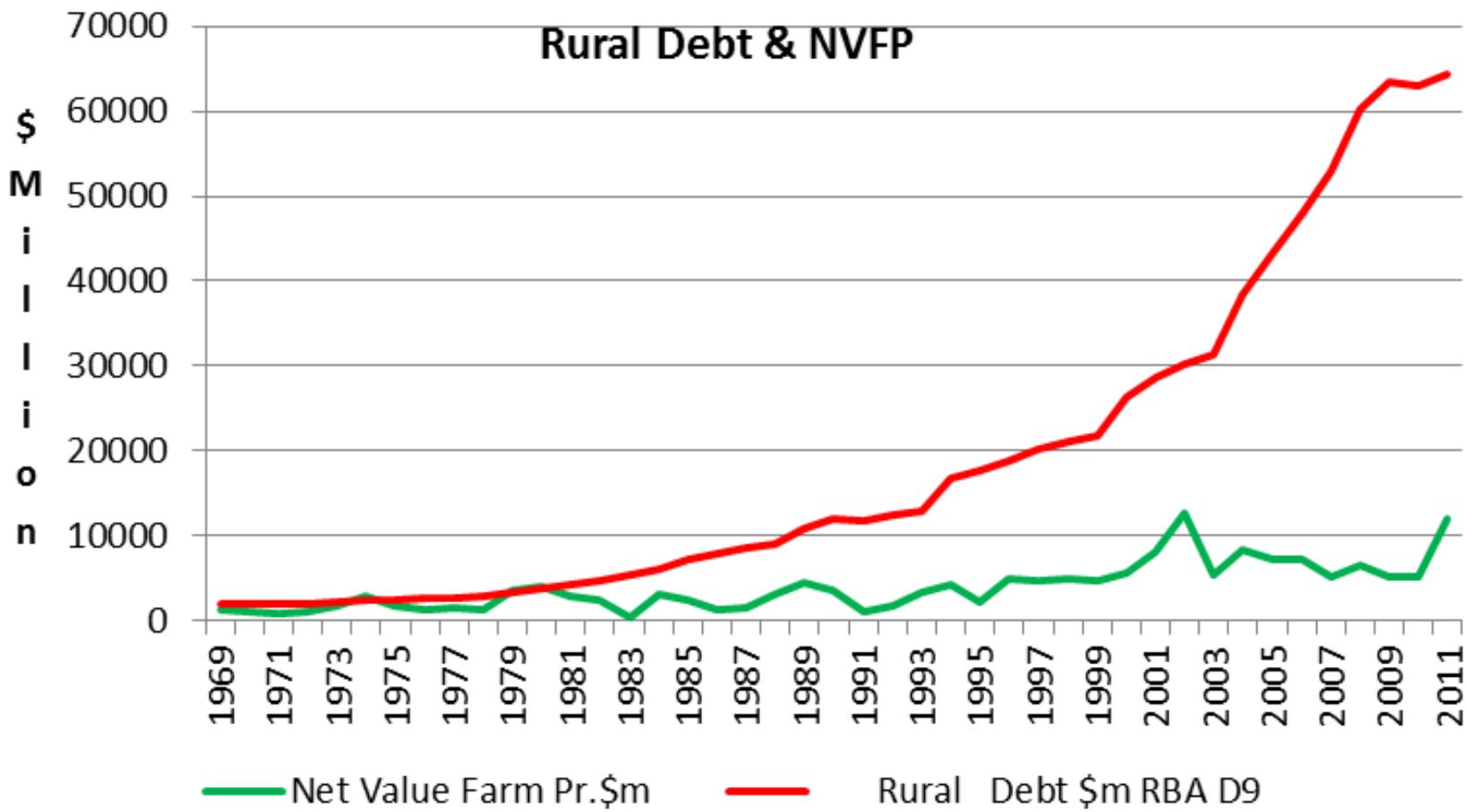


Source: ABS data available on request: Labour Force Survey.

S8.2 FARMERS AND FARM MANAGERS, Age—2010-11



Source: ABS data available on request: Labour Force Survey.



Source: GVFP ABARE ; Agricultural commodity statistics 2011
 Farm Debt, RBA , Rural debt by lender Table D9 2/09/2012

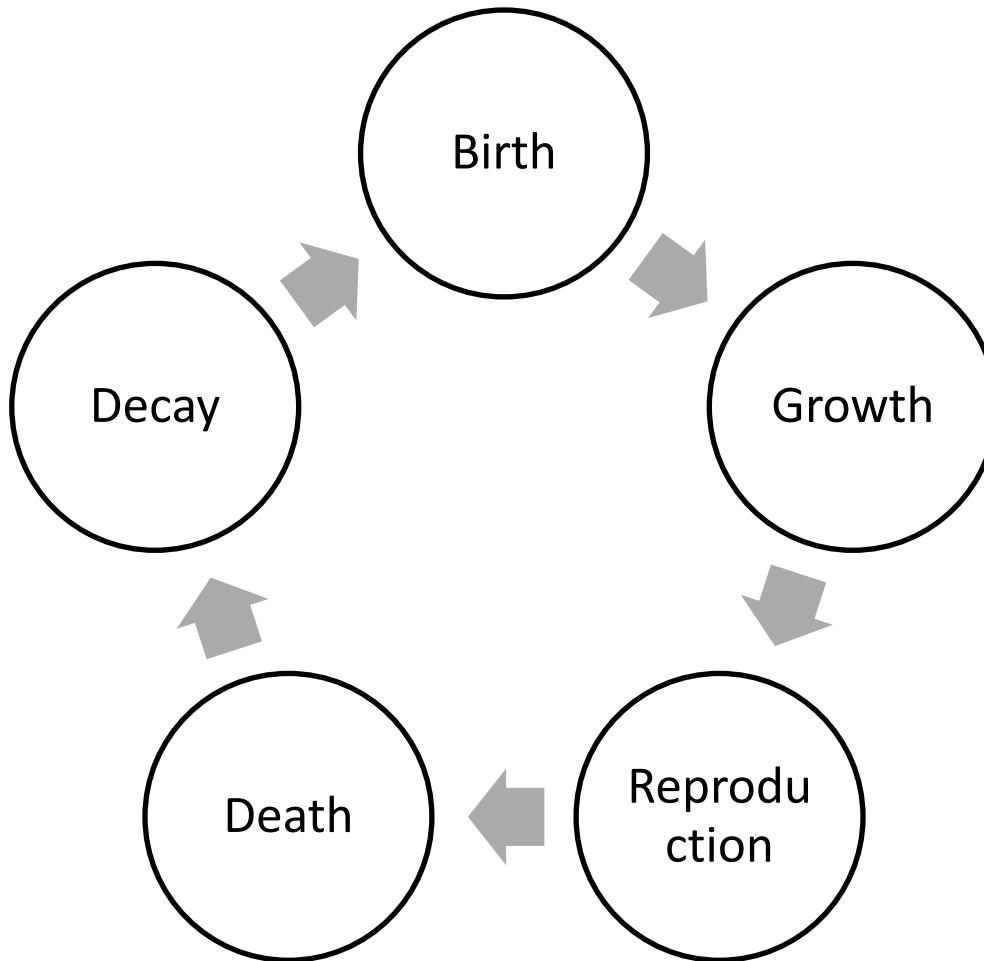
Rural Australia: Crisis 2012 Ben Rees, B. Econ.; M. Litt. (econ.)

"The advice to "get big or get out" cannot solve this problem as this idea is theoretically flawed as in reality rural industries operate under decreasing economies of scale".

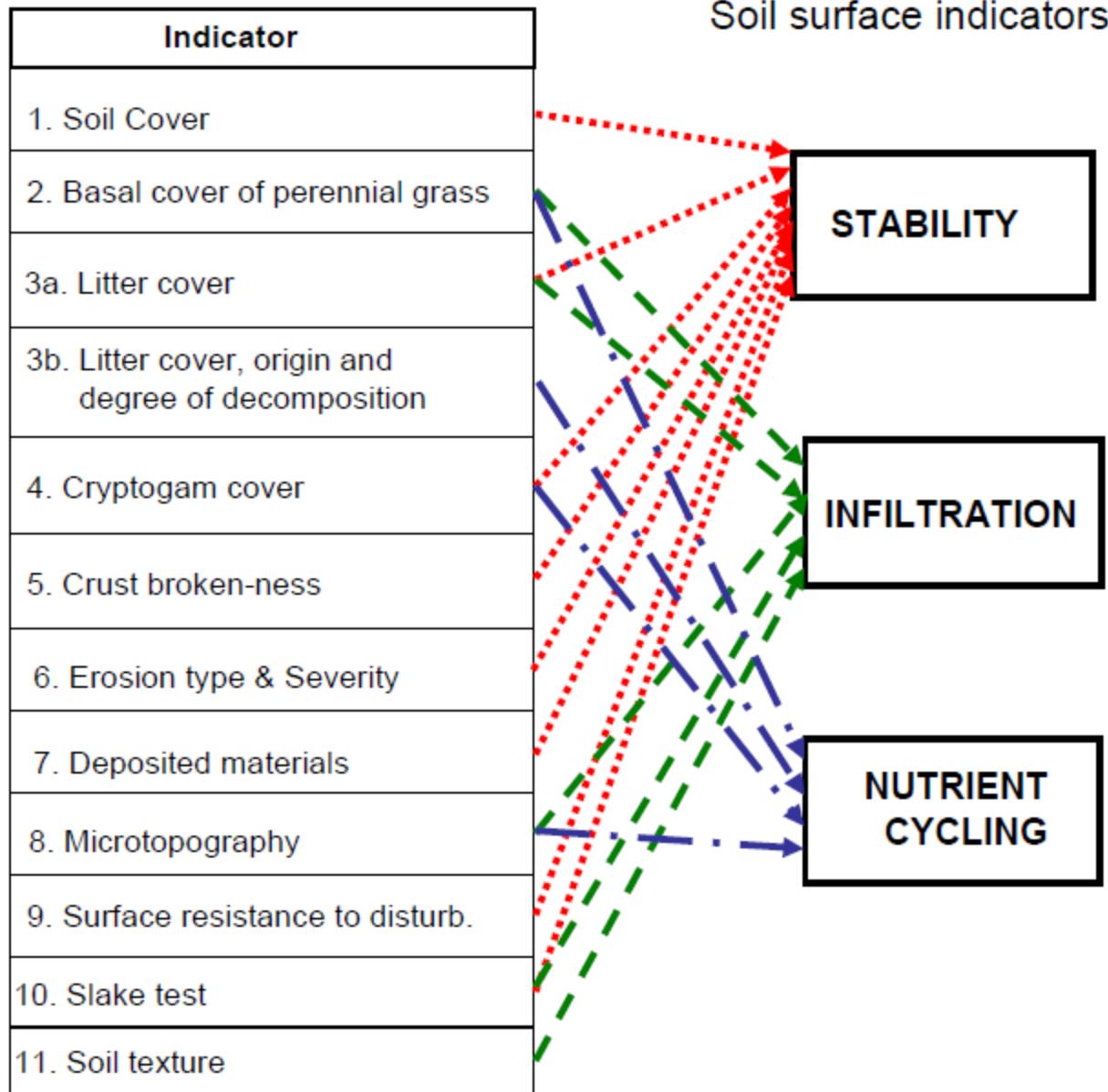
Management as decision making:

- Decision Levels:
- Simple (eg how to sow a crop)
- Complicated (eg how to develop a crop rotation)
- Complex (eg profitability, lifestyle and land improvement)
- The processes we use for each are different

Carbon Cycle



Soil surface analysis



LFA produces numbers that reflect soil health.



Stability	= 69.1
Infiltration	= 39.8
Nutrient cycling	= 31.7

Stability	= 43.3
Infiltration	= 24.0
Nutrient cycling	= 11.5

If you increase landscape function
& perennial diversity it is

IMPOSSIBLE not

to increase:

- Biodiversity
- Soil health
- Soil carbon
- Lower cost



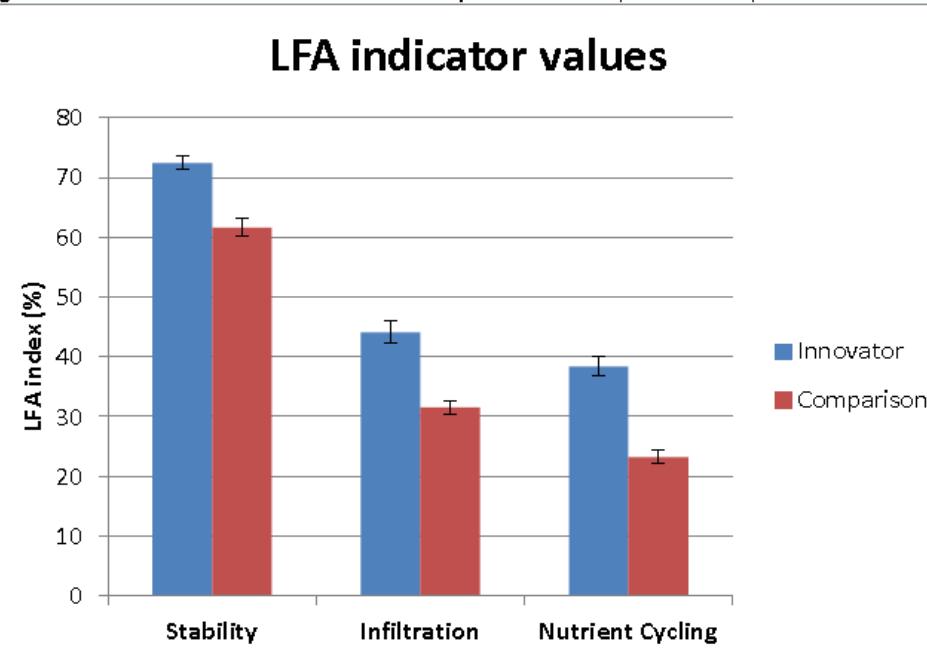
Sydney University Communities in Landscapes project

Benchmark Study of Innovators
Final Report November 2011
By Peter Ampt & Sarah Doornbos

Table 4. Differences in LFA indicator values between innovator and comparison sites (mean \pm SE) and the p-values for paired t-tests.

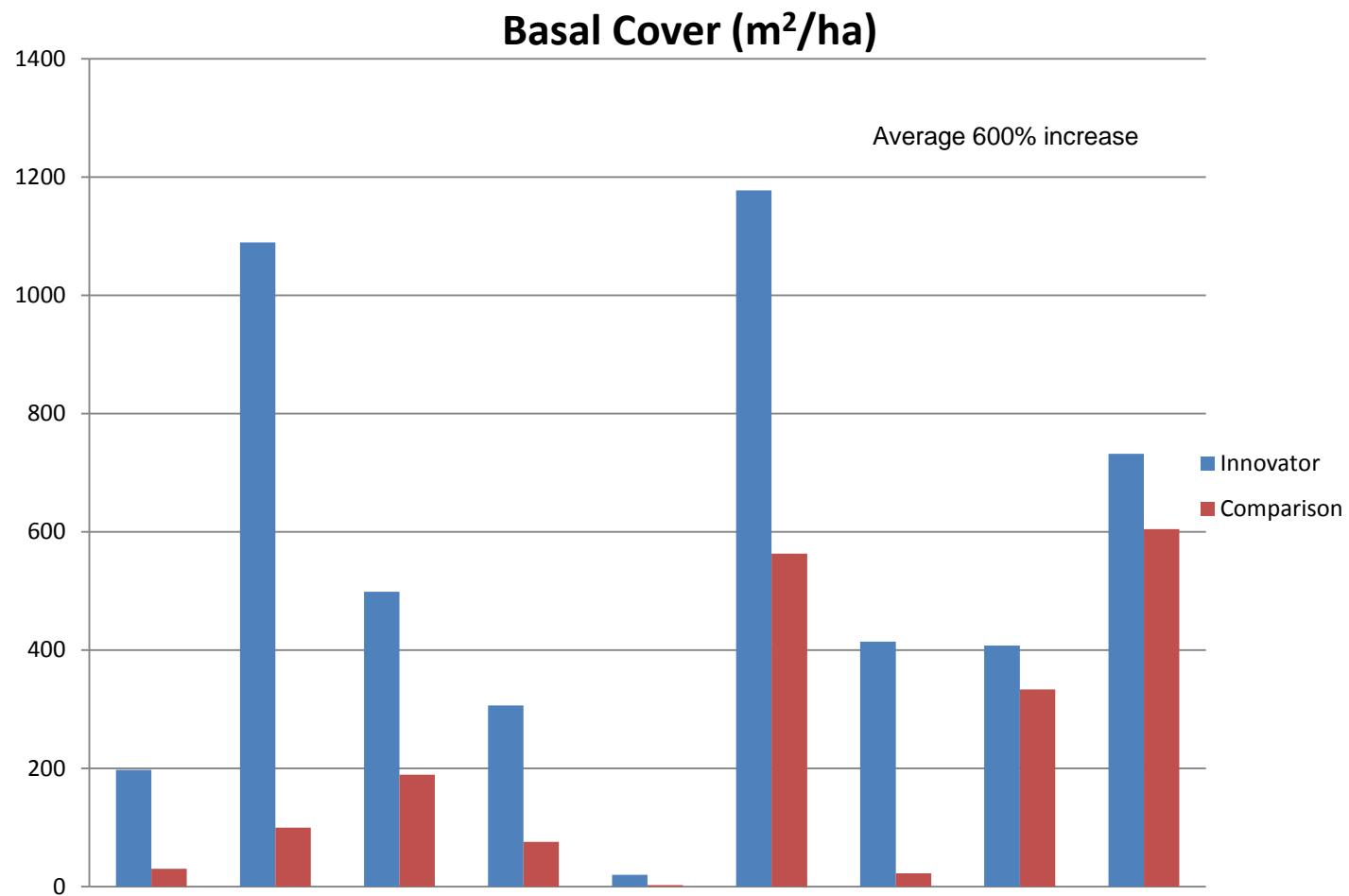
LFA indicator	Innovator	Comparison	Difference	p-value	% increase
Stability	72.4 ± 1.0	61.6 ± 1.5	10.8 ± 1.1	<0.001	17.5
Water Infiltration	44.0 ± 1.9	31.5 ± 1.2	12.5 ± 1.0	<0.001	40
Nutrient Cycling	38.4 ± 1.6	23.2 ± 1.1	15.2 ± 0.9	<0.001	65

Fig 4. LFA indices for innovator and comparison sites (mean \pm SE)



Sydney University Communities in Landscapes project

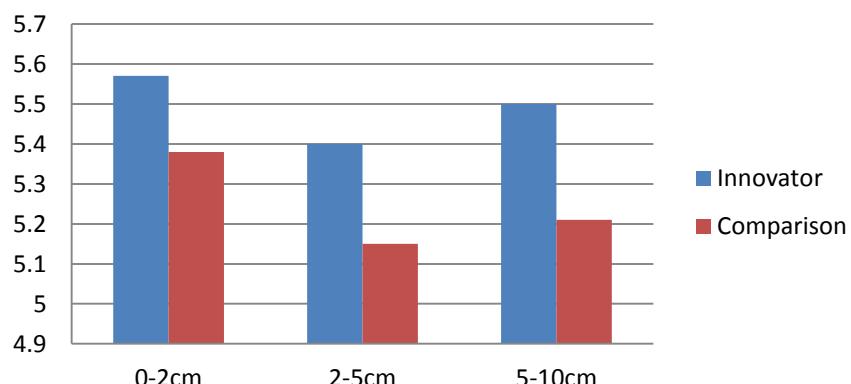
Benchmark Study of Innovators
Final Report November 2011
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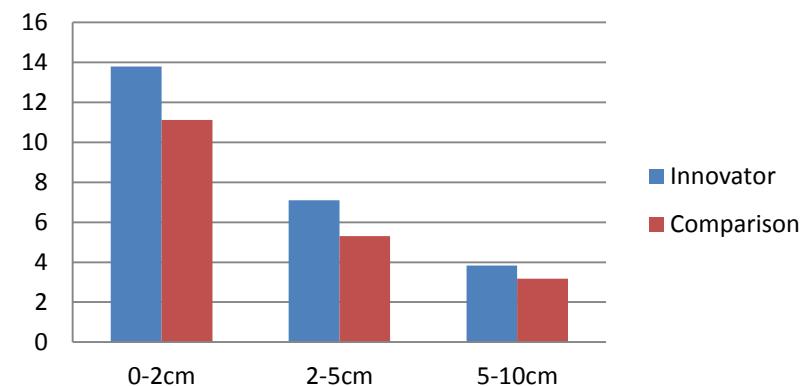
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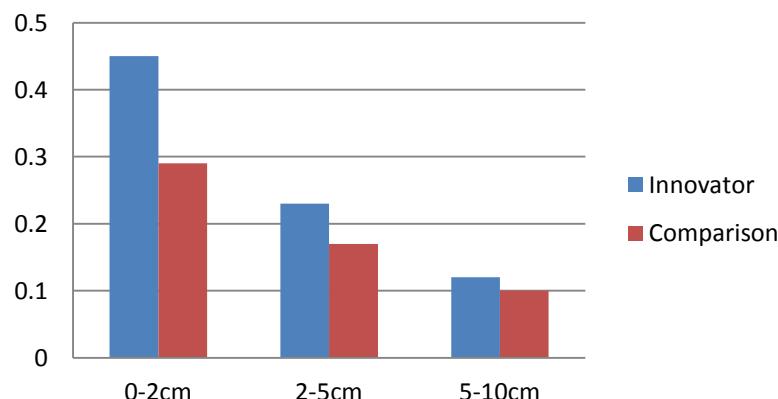
Soil pH



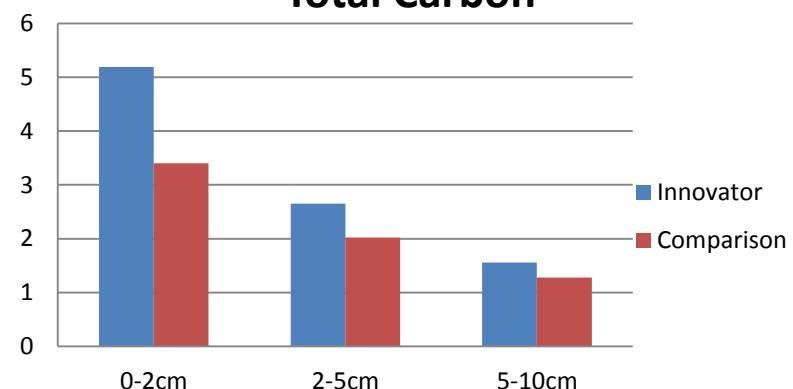
Extractable Bray Phosphorous



Total Nitrogen %N



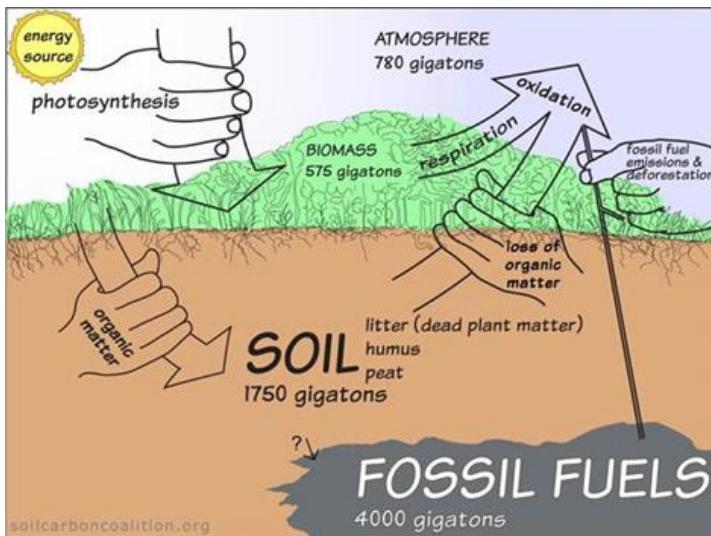
Total Carbon



Analysing Projects

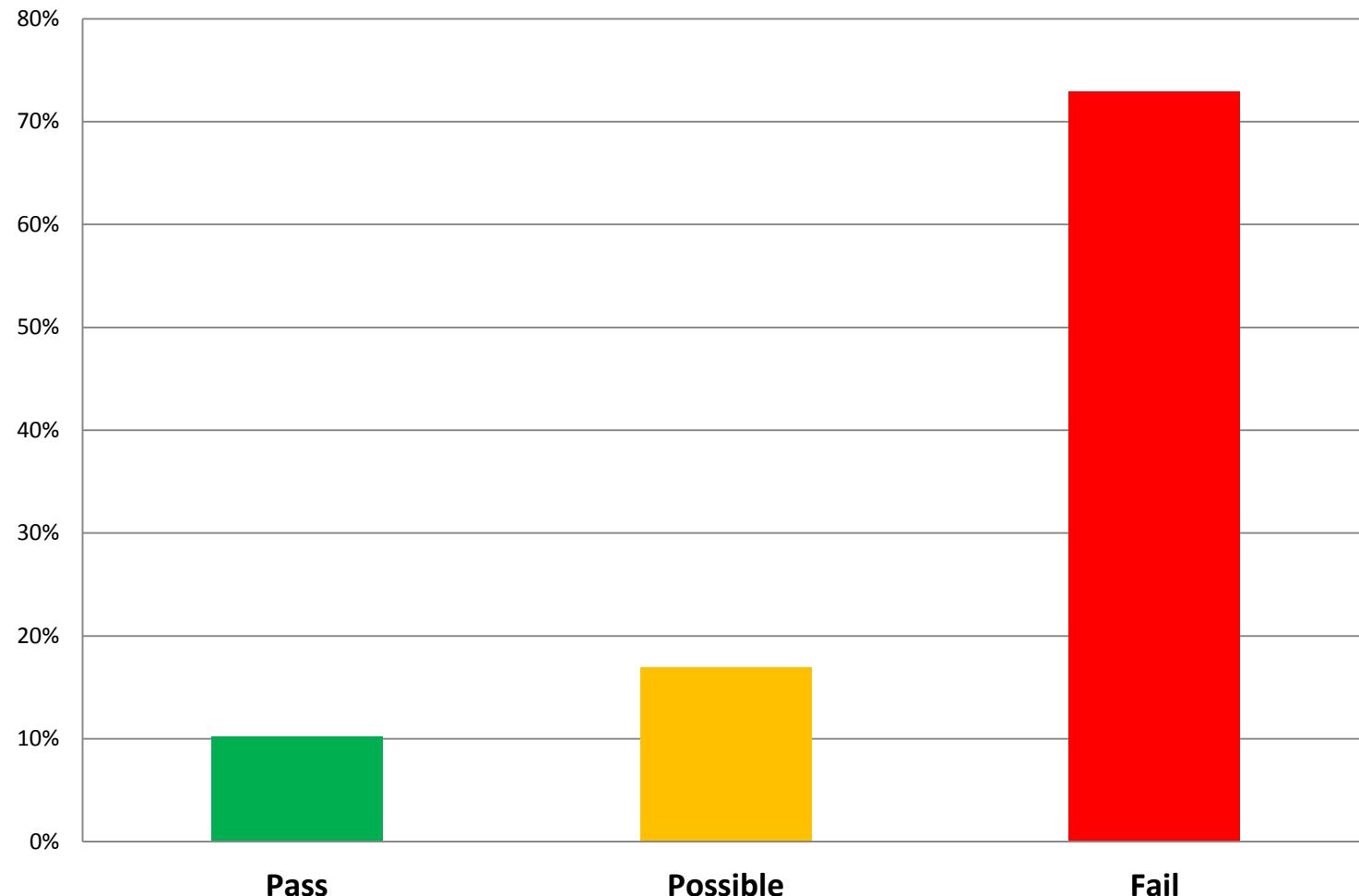
Two Simple filters:

- Does the project reduce atmospheric carbon – net sequestration
- Does the project increase landscape function
 - Larger and more dense perennial grasses
 - Decomposing litter between perennial grasses

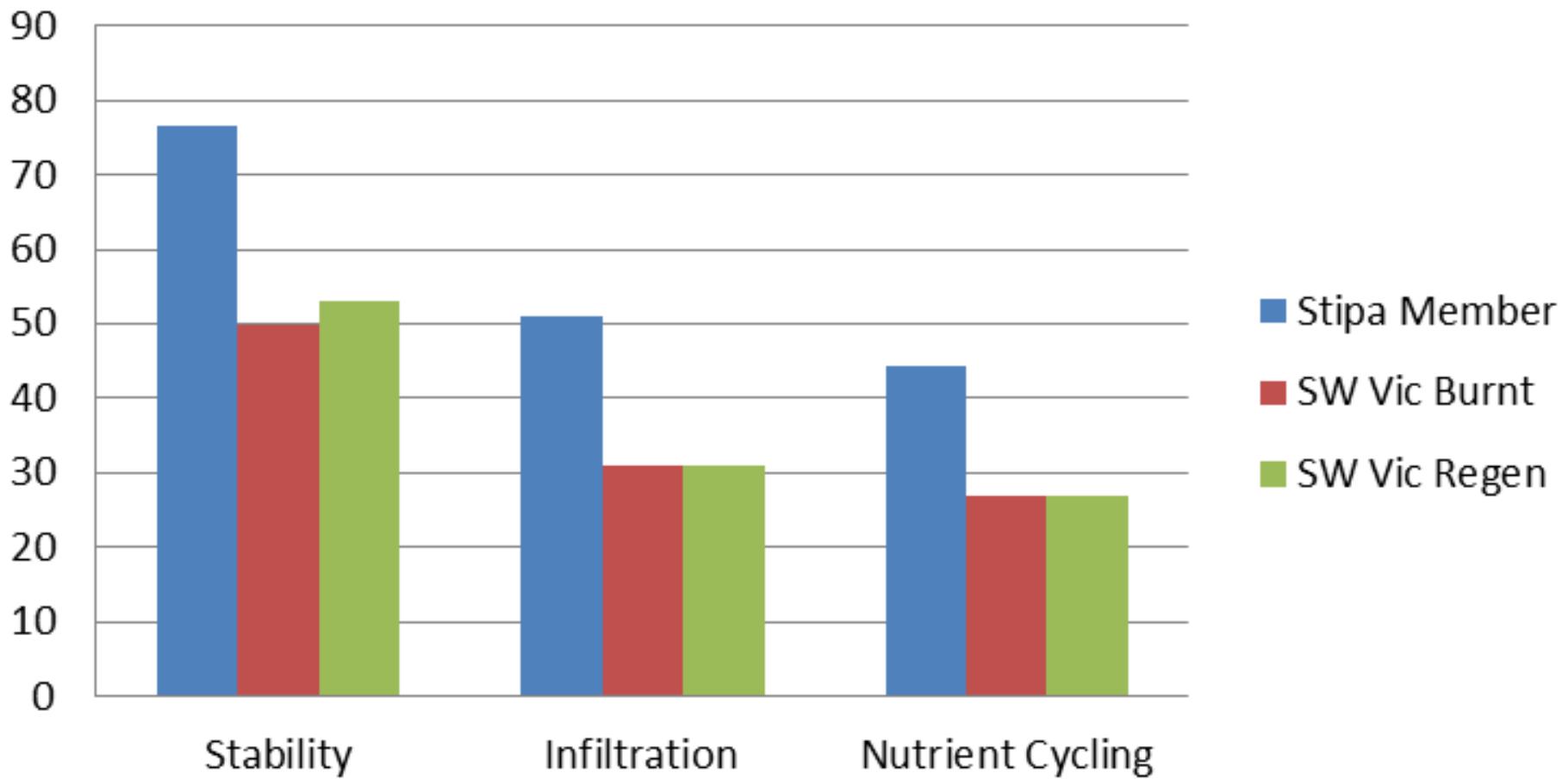


[MOD14A1 M FIRE](#)
[Graeme Hand.mov](#)

ANALYSIS OF FUNDED PROJECTS



Typical LFA Results





SW Vic Regeneration



SW Vic Burnt



Stipa Member

Future Resource Base - Land

- Dense perennial grassland with high landscape function and biodiversity
- Deep, (>20mm) stable litter layer with visible fungal attack (LFA litter class 6-7lm)
- Increasing mature perennial grass plants (large bases)
- More than 30 perennial grass species with healthy age structure



Graeme Hand 0418532130
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graeme.hand@bigpond.com



Graeme Hand 0418532130
graeme.hand@bigpond.com



Graeme Hand 0418532130
graeme.hand@bigpond.com



Graeme Hand 0418532130
graeme.hand@bigpond.com



Graeme Hargreaves 15532130
graeme.hargreaves.com



Graeme Hard 0418532130
18.10.2012
graemehard@bigpond.com

18.10.2012

Weed Control





09.10.2012
Graeme Hand 0418532130
graeme.hand@bigpond.com

09.10.2012

Cognitive Threshold

- *Once we reach a cognitive threshold, we begin unilaterally rejecting data, ideas, and solutions in a misguided attempt to make complexity manageable.*
- Costa, Rebecca D (2012-02-29). The Watchman's Rattle: Thinking our Way out of Extinction (p. 83). Ebury Publishing. Kindle Edition.

Meat and Livestock Australia - Understanding Pasture Re-sowing Decisions for Meat Producers
Final Draft report – Phase 2
March 2012

- Resowing isn't always profitable
- Pasture resowing isn't “best practice”
- Resowing locks in high inputs

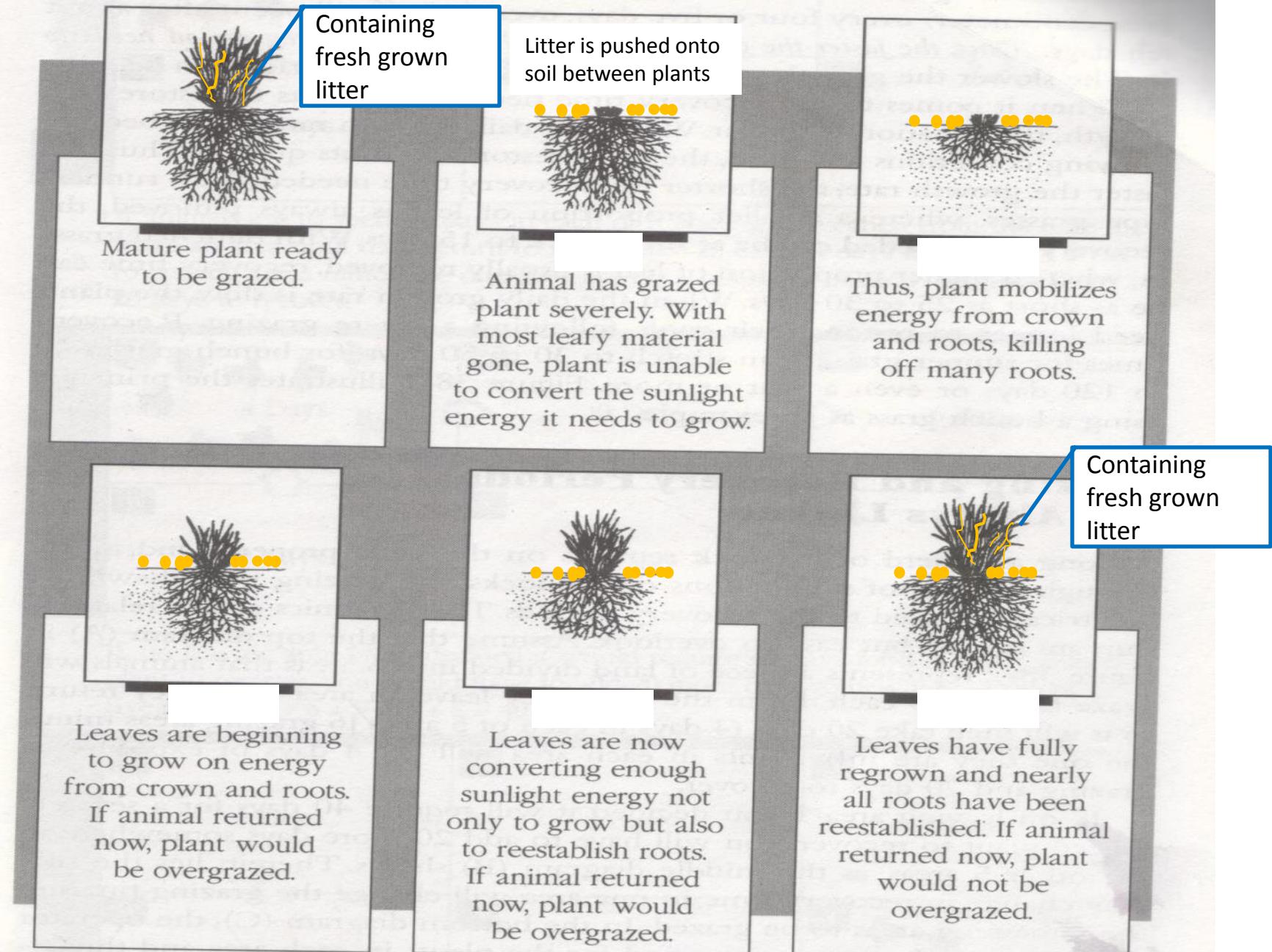


Figure 38-1 To avoid overgrazing, monitor plant recovery rates.
graeme.hand@bigpond.com

Monitor plant recovery





Managing Holistically® Planned Grazing



Graeme Hand 0418532130 graeme.hand@bigpond.com