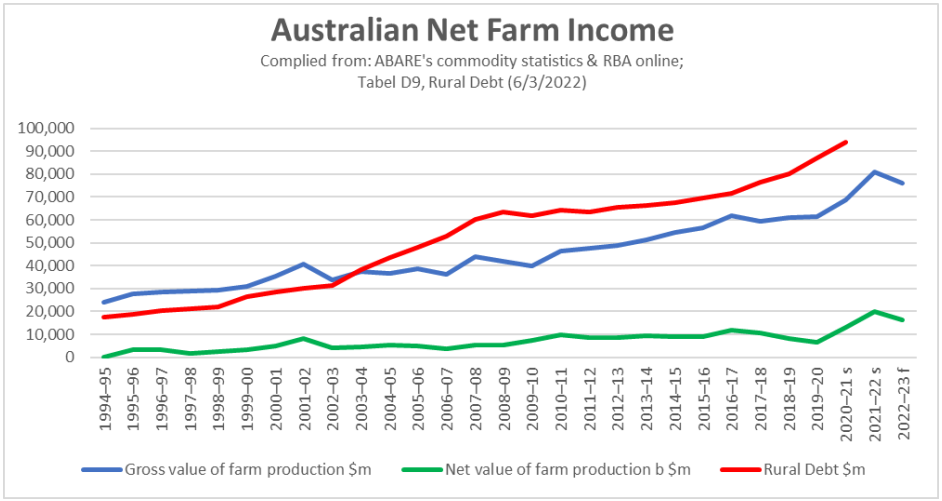
Adaptive Planned Grazing

Graeme Hand

graemehand9@gmail.com

0418532130

1



2

. Underestimating Risk

- "……..farm viability depends more on minimising losses than maximising production, and it is these accumulated losses which threaten farm business survival and growth".

Dr Tim Hutchings & family

3

Risks in Agriculture

1. Debt

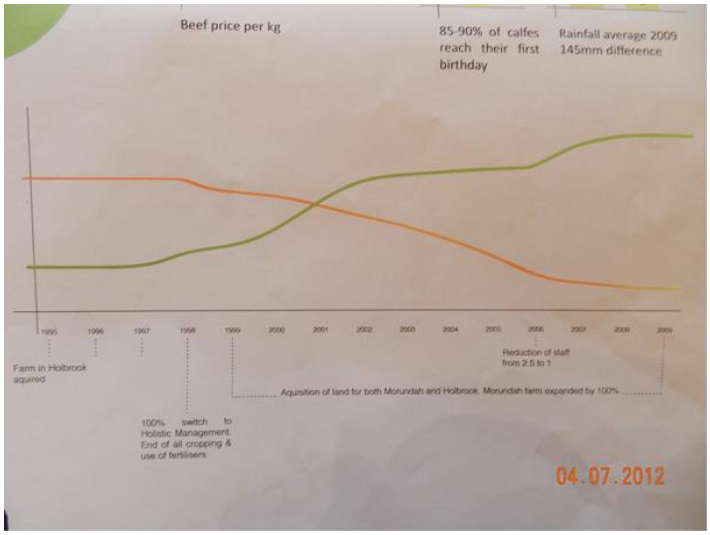
2. Seasonal

3. Market Price

4

4

Coughlan's - Profit and Expenses



5

Landscape Function

Simplified

Soil surface analysis

Indicator
1. Soil Cover
2. Basal Cover of perennial grass
3. Litter cover
4. Decomposition of litter cover
5. Surface roughness

Landscape Function

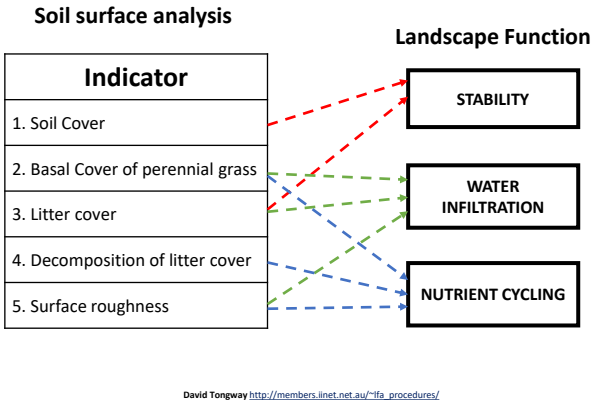
- STABILITY
- WATER INFILTRATION
- NUTRIENT CYCLING

David Tongway http://members.iinet.net.au/~lfa_procedures/

6

Landscape Function

Simplified

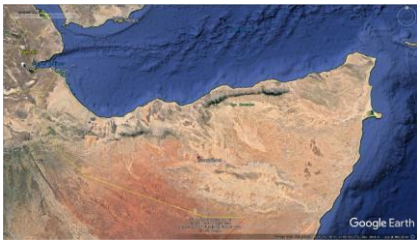


David Tongway http://members.iinet.net.au/~lfa_procedures/

7

Safe to fail areas

- Benjamin Sellé – Somaliland
- https://youtu.be/Xi3DGFBVzgA



8

Benjamin Selle

9

10

11

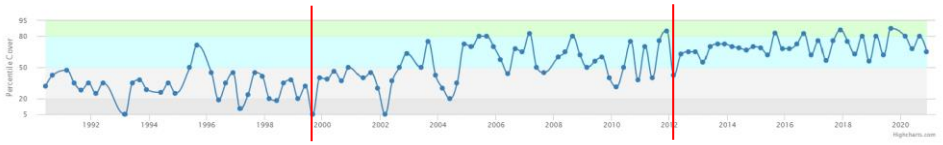
Neringla Night Moves

12

What have we already done ?
Drought-proof Grassland Regeneration At Scale

Neringla ground cover versus next valley ground cover

Source: FarmMap 4D – fractional ground cover satellite data



Pre Holistic Management training

Holistic Management Planned Grazing

Landscape function Planned Grazing with Safe to Fail* trials

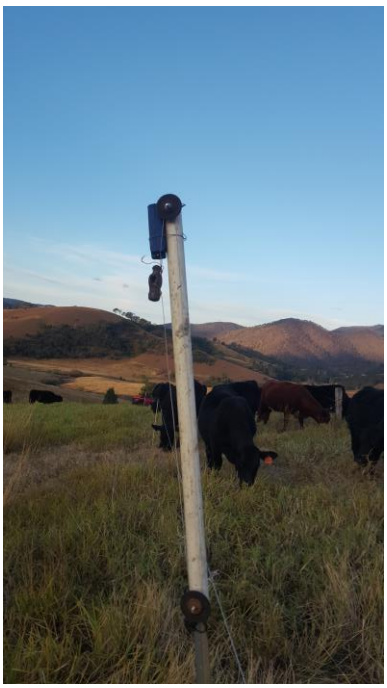
1991-2021

6 weeks after drought breaking rains – no inputs

- When blue line is above 50%, Neringla has more ground cover than next valley.
- When blue line is below 50%, Neringla has less ground cover than next valley.

*https://cognitive-edge.com/

13



14

Grass Productivity

Andre Voisin

"To what height should grass be grazed?" **Page 56**

.....The logical idea is therefore not to graze the sward too closely so that the plant will be left with sufficient green surface, the chlorophyll of which will be able, right from the start, to carry out its work of synthesis and immediately aid regrowth. In this way the duration of the initial period of slow regrowth is reduced. From the plant physiology point of view one might say that the low level part of the S curve is reduced.

15

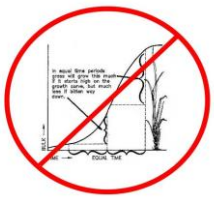
Grass Productivity

Andre Voisin

"To what height should grass be grazed?" **Page 56**

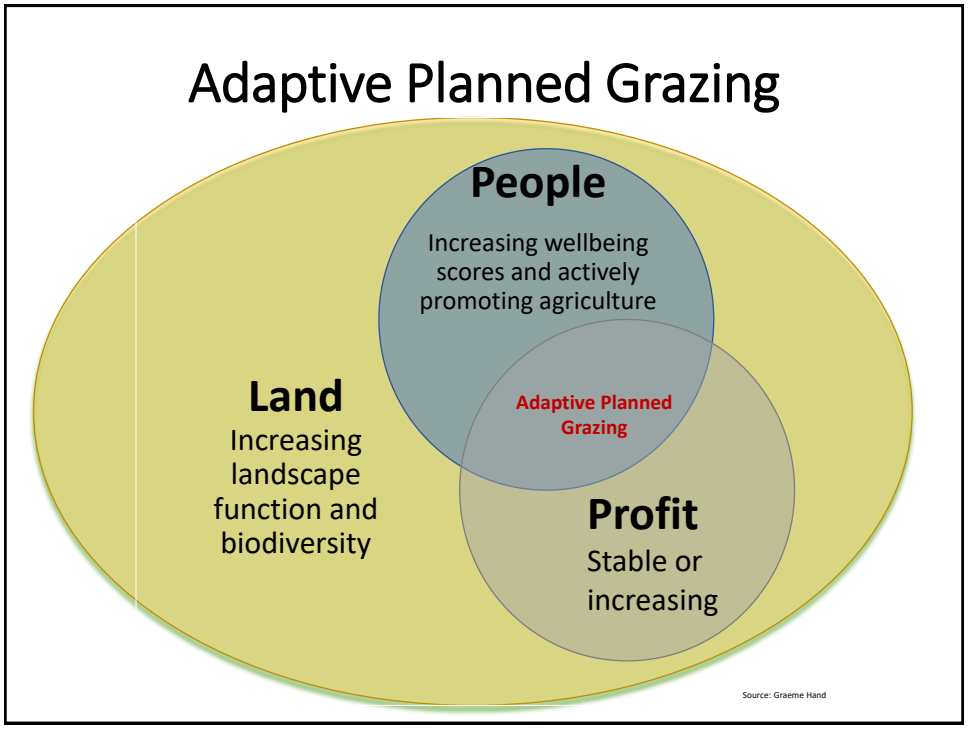
Unfortunately we see here again perfectly sound, theoretical and scientific considerations running foul of practical obstacles which could not be foreseen a priori.

Cows (or animals in general) have the habit of first grazing down the parts they prefer before going on to the herbage they like less."



Do not use this idea

16


Adaptive Planned Grazing
People
Increasing wellbeing scores and actively promoting agriculture
Land
Increasing landscape function and biodiversity
Adaptive Planned Grazing
Profit
Stable or increasing
Source: Graeme Hand

17

18

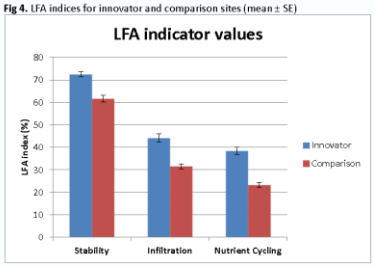
Sydney University Communities in Landscapes project

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 ± 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

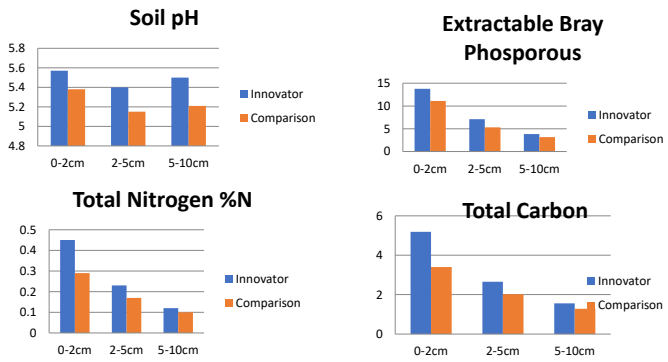
Fig 4. LFA indices for innovator and comparison sites (mean ± SE)



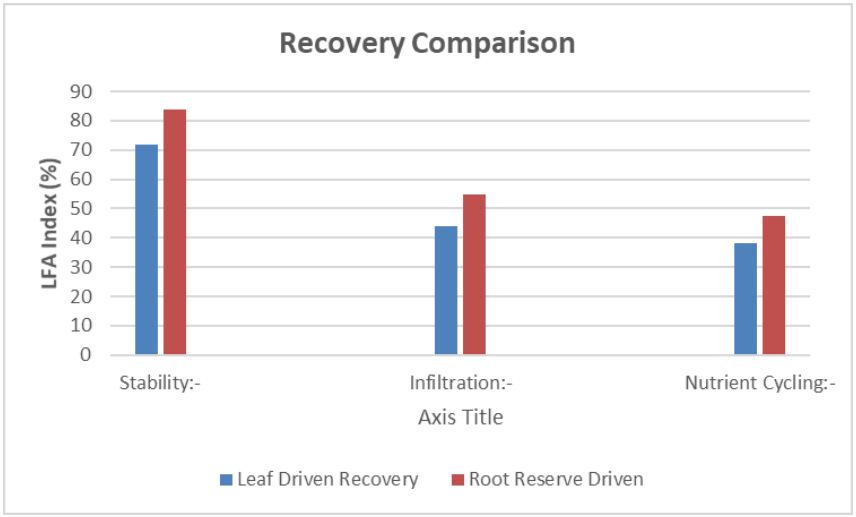
19

Sydney University Communities in Landscapes project

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

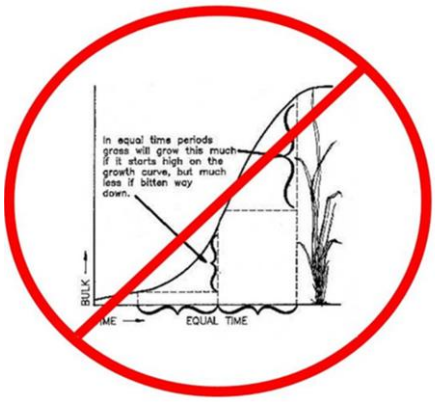


20



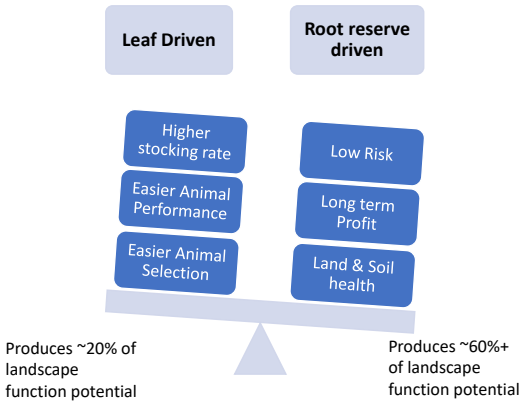
21

Sigmoid Curve Grazing – not relevant when grazing for landscape function. You can't hack time



22

Recovery - Different schools of thought



23

24

Decomposing vs Raw Litter

Decomposing litter on the left

25

Decomposing litter is the common link

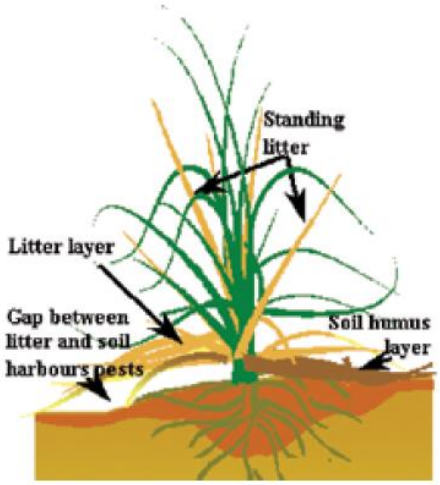
- **Grazing**
- **Cropping**
- **Horticulture**
- **Forestry**

26

26

Litter in contact with the soil

- Left of plant litter not trampled – reduces growth
- Right of plant litter has been trampled and cycling – promotes growth



27

[The Power of Positive Deviance: How Unlikely Innovators Solve the World's Toughest Problems]

- "It's easier to act your way into a new way of thinking, than think your way into a new way of acting."— Jerry Sternin,

28

4 Main Barriers to successful landscape function grazing

1. Use frameworks that account for complexity (HM & Cynefin frameworks) to design enterprises for low cost, low risk profit and to reduce unintended consequences.
2. Use safe to fail trials (S2F) to determine the combination of recoveries, stock density and utilisation required to rapidly regenerate your land also find what you need to avoid
3. Develop convenient infrastructure to action this evidence (flexible strip fencing and water)
4. Select animal phenotypes and adaption that thrive under this management

29

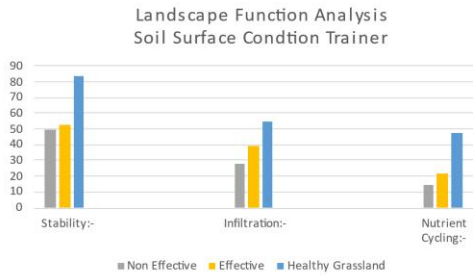
Regen Ag Barriers to success

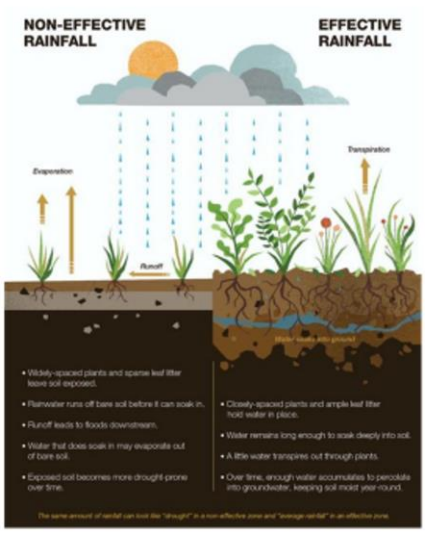
BARRIERS	TOOLS
Lack of Motivation	Commitment Norms Incentives
Forget to Act	Prompts
Lack of Social Pressure	Norms
Lack of Knowledge	Communication Social Diffusion
Structural Barriers	Convenience

https://cbsm.com/

30

Wilmond Park, Braidwood NSW





Source: Savory Institute

31

Adaptive Planned Grazing

Graeme Hand

graemehand9@gmail.com

0418532130

32