


**Regenerative Grazing to Increase Soil Health and Profitability**

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**What is Regenerative Agriculture?**

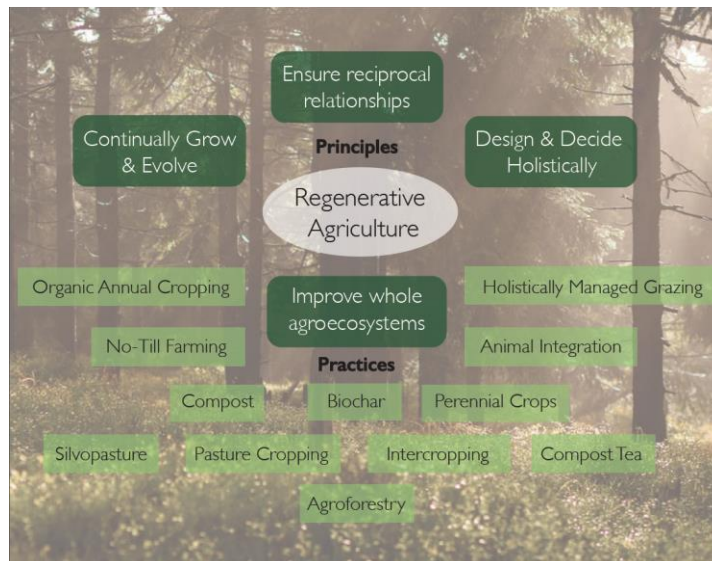


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## Typical Definitions

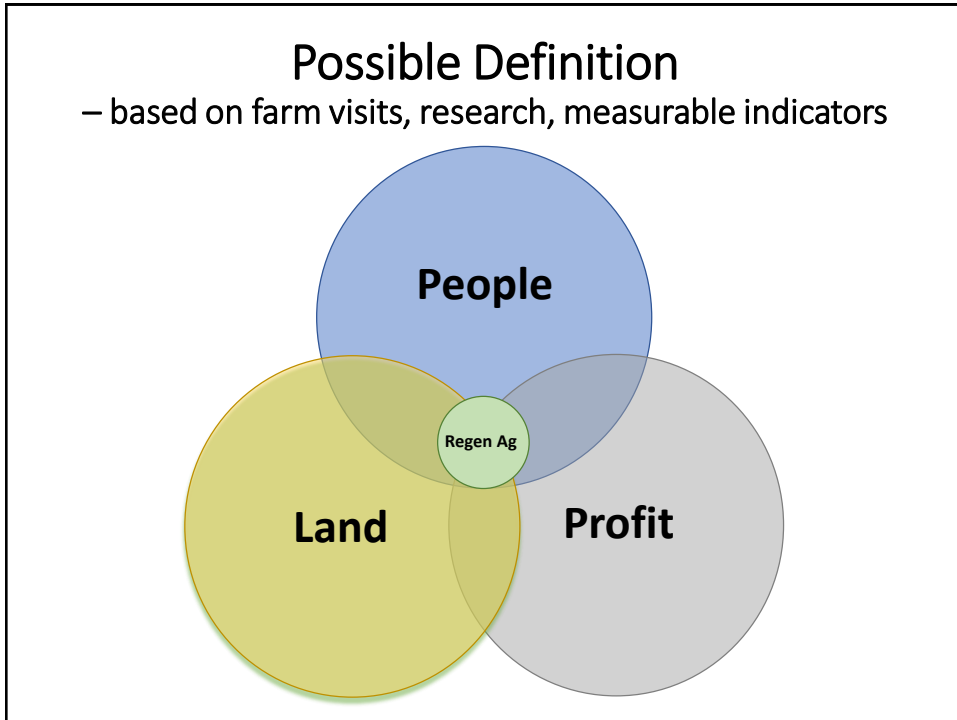
- Start with principles
  - *Increases soil organic matter*
  - *Improve whole agroecosystems*
  
- List of Practices
  - *No till cropping*
  - *Compost*
  - *Silvopasture*

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[terra-genesis.com/regenerative-agriculture](http://terra-genesis.com/regenerative-agriculture)  
[regenerativeagriculturedefinition.com](http://regenerativeagriculturedefinition.com)

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## People – actively promoting agriculture to family and others

**Exploring Agroecological Sustainability: Unearthing Innovators and Documenting a Community of Practice in Southeast Australia**

Rebecca Cross and Peter Ampt

Faculty of Agriculture and Environment, University of Sydney, Sydney, New South Wales, Australia



THE UNIVERSITY OF SYDNEY

**ABSTRACT**

In this article we describe a movement to regenerate and sustainably use native grasslands using innovative grazing and cropping strategies. We find that this movement has the essential characteristics of a “community of practice” (COP) and is a strong example of a bottom-up transition toward a sustainable agroecological farming system. This COP was identified and described using participatory rural appraisals followed by biophysical and sociocultural studies with active COP members. Using these multiple mixed-method approaches helped characterize the COP’s many layers, revealing how and why it is driven and fashioned by innovators who collaborate via joint enterprise, mutual engagement, and shared repertoire. Holistic Management, Grazing for Profit, and Stipa Native Grasses Association were the key enabling programs/associations for the COP, which, like other agroecological movements, exists on the margins of conventional agri-innovation systems and endures with little public acknowledgment or support. It is a potent grass-roots example of adaptive farm management that generates optimism in the farming families involved, and challenges existing research and extension paradigms regarding both innovation and practice change.

**ARTICLE HISTORY**

Received 28 January 2015  
Accepted 2 June 2016

**KEYWORDS**

Agroecology; community of practice; farmer-driven innovation; integration; knowledge transfer; practice change

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## People – high well being scores

### NESP-EP: FARM PROFITABILITY & BIODIVERSITY

Graziers with better profitability, biodiversity and wellbeing

#### Abstract

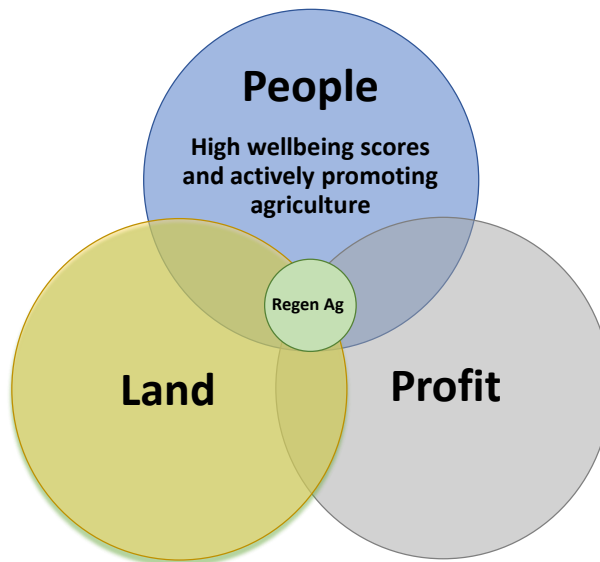
There is significant potential to simultaneously increase environmental health and biodiversity in grassy woodlands biome and improve financial and wellbeing for graziers. However, traditional methods of landholder engagement and education on their own may be insufficient to realise the opportunity. We describe some areas where further investigation should be undertaken with a view to identifying policy directions.

Sue Ogilvy, Mark Gardner, Dr Thilak Mallawaarachchi, Dr Jacki Schirmer, Kimberly Brown, Dr Elizabeth Heagney.

Corresponding author: sueogilvy@gmail.com

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## Possible Definition



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## Land - No till as a practice



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## Land - No till that is regenerative



Continuing Regeneration

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## Land - No till that is regenerative



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## No till comparisons

• Management	N	P	K	WEOC
• Organic	2	156	95	233
• No-Till, Low Diversity	27	244	136	239
• No-Till, MD, High Syn.	37	217	199	262
• No-Till, HD, ZS, Lvst,	281	1006	1749	1095
•	#/acre			ppm
• Tested by Dr. Rick Haney, ARS, Temple, TX				

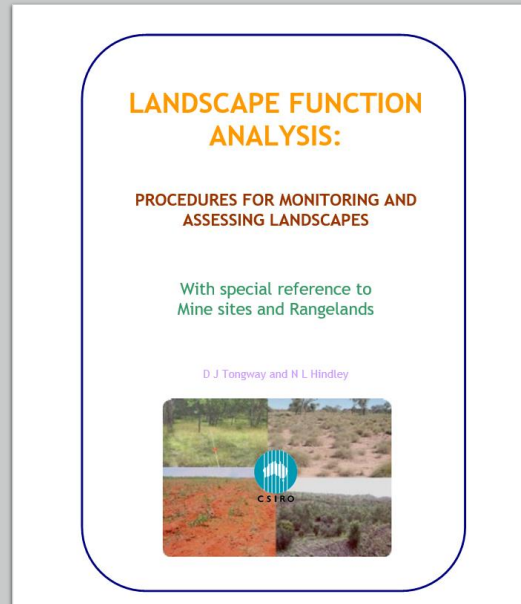
MD/HD – medium/high diversity, ZS – zero synthetic fertilizer, Lvst - livestock

Source: Gabe Brown

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## What is the science?

- Most appropriate could be landscape function
- *(Tongway et al 2004)*



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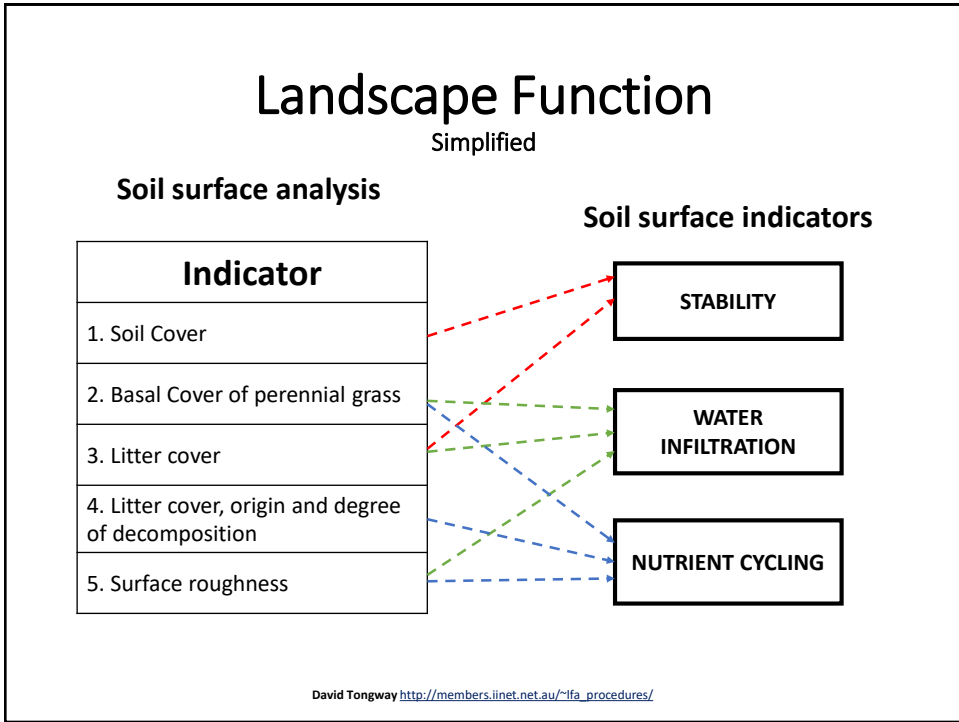
## What is landscape function?

- Landscape function analysis (LFA) is a monitoring procedure that uses rapidly acquired field-assessed indicators to assess the biogeochemical functioning of landscapes.....

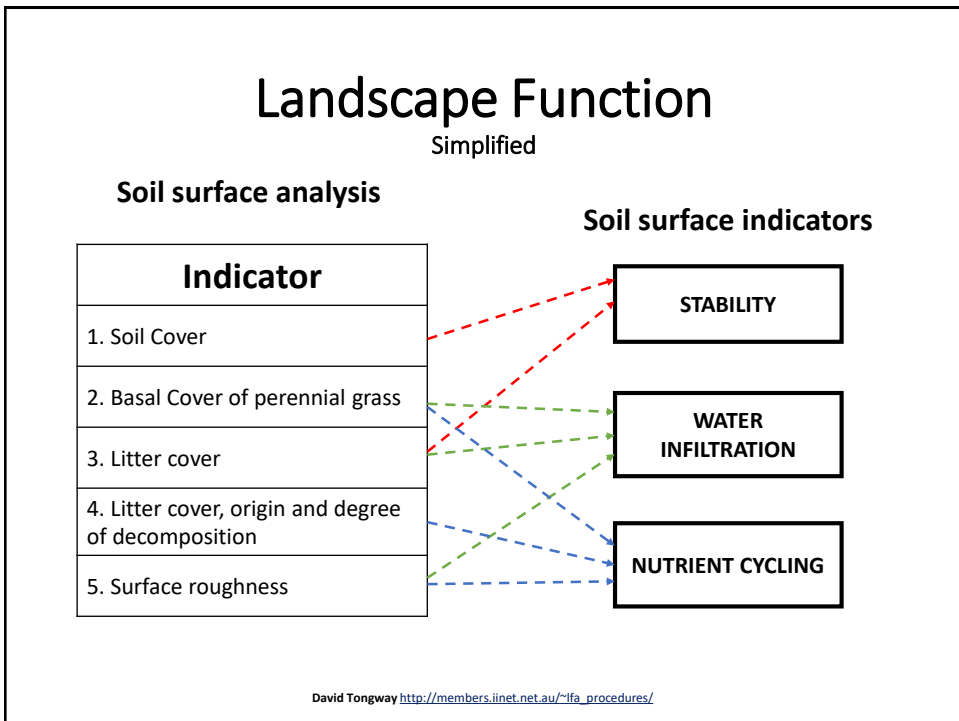
• *LFA Manual © CSIRO Australia 2004*



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# Land

## Practice based to function based?



<https://www.greatplainsag.com/en/products/9774/1206nt-drill>



Continuing Regeneration

Photo: Gabe Brown




Practice based

Function based

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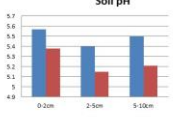
# Land



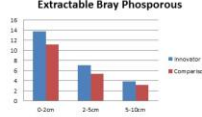
### Sydney University Communities in Landscapes project

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

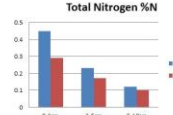
#### Soil pH



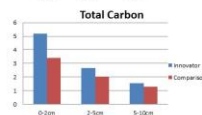
#### Extractable Bray Phosphorous



#### Total Nitrogen %N



#### Total Carbon

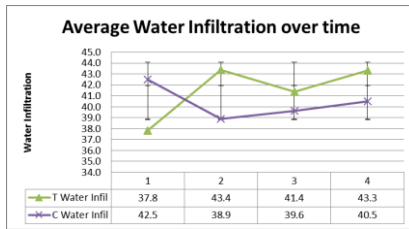
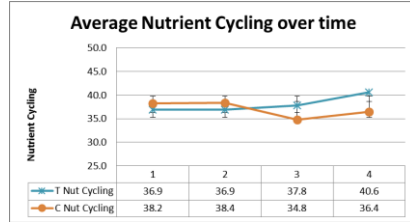
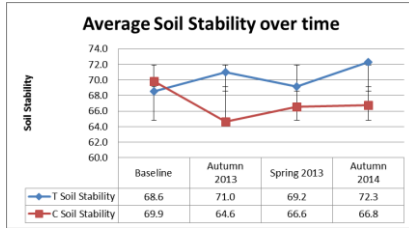


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# Land

## Combined LFA Results



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# Wilmond Park

**Treatment**



**Control**



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Decomposing litter is the common link

- **Perennial Pasture**

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Decomposing litter is the common link

- **Cropping**

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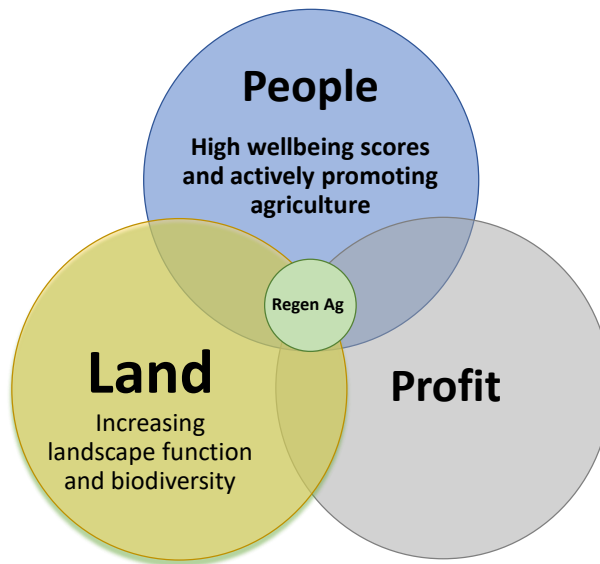
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## Decomposing litter is the common link



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## Possible Definition



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## Profit – stable or increasing

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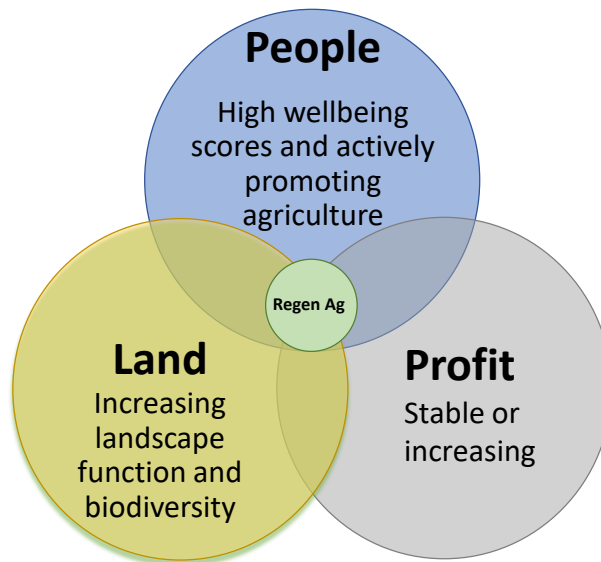
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