

The Balancing Act: Quantifying Farmers' Value-Based Sustainability Choices

Pradeep Rai

Supervisors: Sosheel S. Godfrey, Christine E. Storer, Ryan H. Ip, Karl Behrendt & Thomas L. Nordblom

Introduction

Regenerative Agriculture (RA) has gained traction as an environmentally oriented alternative production system that supports sustainability objectives (Rai, et al. 2025).

However, unlike earlier conventional agriculture of the past, **Modern Conventional Agriculture (MCA)** of today similarly prioritises environmental stewardship and sustainability, like RA in Australia (Pratley & Kirkegaard, 2019).

This study explores how **RA and MCA farmers** value and prioritise **sustainability**. It aims to provide important insights for agricultural sustainability programmes and policies in Australia.

Methods

Survey: 103 online responses were analysed.

Respondents:

- Self-identified RA farmers (49.5%), MCA farmers (39.8%), and an MCA + RA Blend (10.7%).

Analysis:

- Maximum-Difference Scaling (MaxDiff) used to measure the farmers' preferences.
- Choice-Based Conjoint method to understand their trade-offs.
- Wilcoxon test conducted with p-value adjusted to Bonferroni's method.

Results and Conclusions

Fig 1: Farmers' Preferences in Sustainability Domains

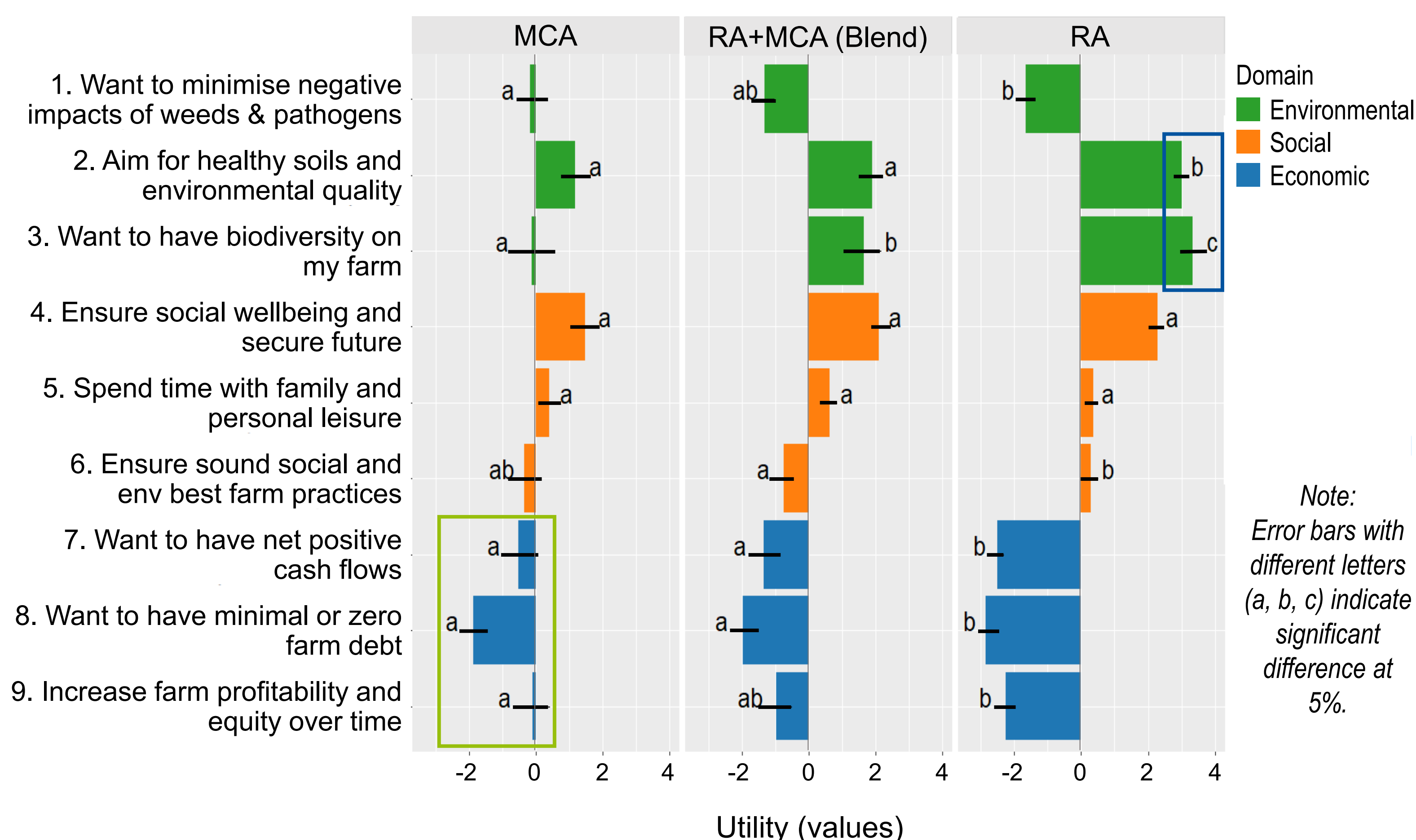
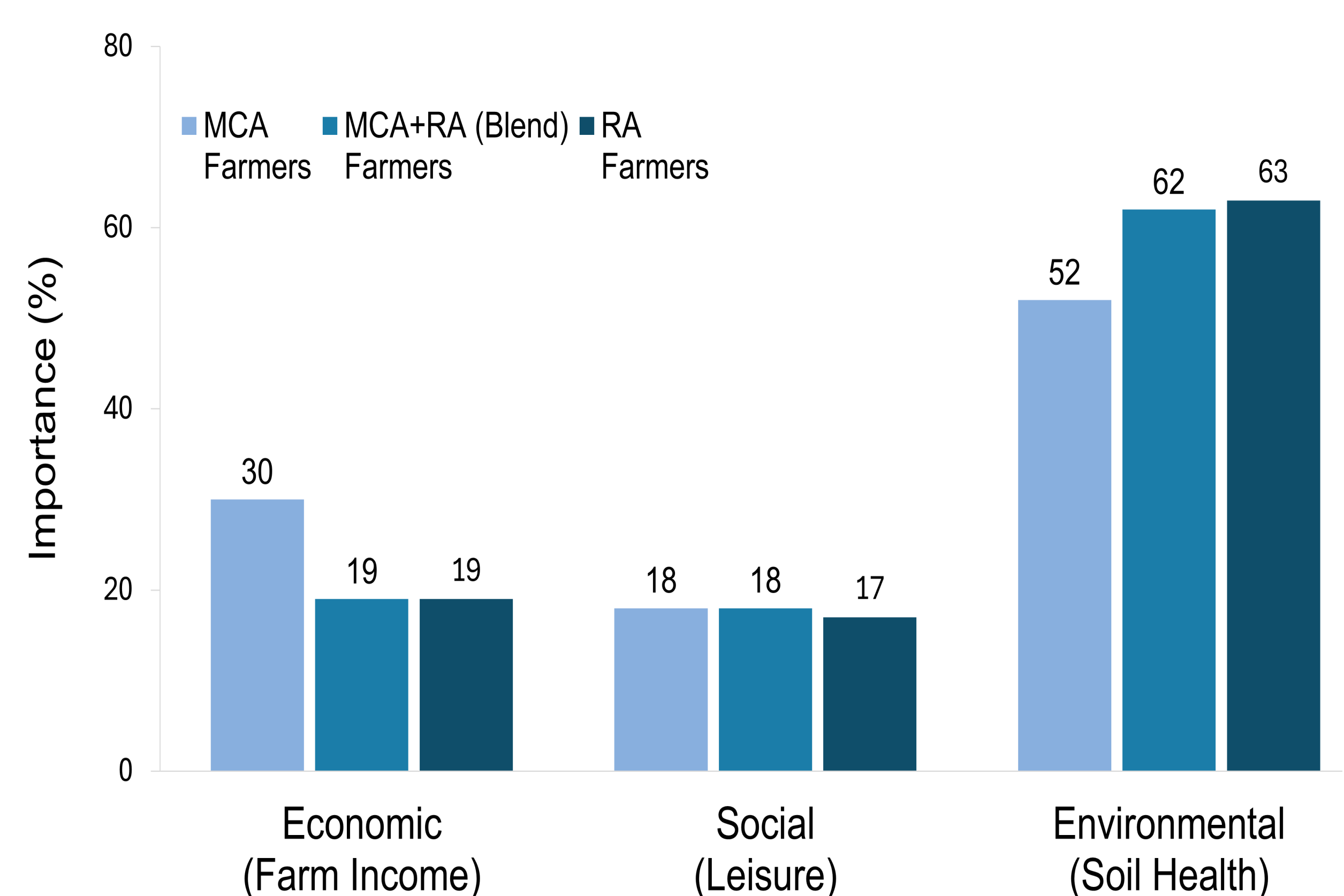


Fig 2: Relative Importance of Sustainability Priorities Among Farmers



- RA farmers prioritised the environmental domain more highly than MCA farmers (Fig 1 & 2).
- MCA farmers prioritised the economic domain more highly than RA farmers (Fig 1 & 2).

- Not all aspects of the environmental domain were of equal relative importance to each group (Fig 1).
- The social domain was of similar importance to all groups (Fig 1 & 2).

➔ Although some differences were observed between the RA and MCA farmer groups, their relative preferences show many similar trends.