

Total nitrogen and dry matter yields from cocksfoot based pastures in New Zealand

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Conclusion

Temperate grasses maintained a critical N concentration of ~3.1% of total annual dry matter production compared with ~3.9% for clover (Fig. 1).

Introduction

- In dryland pastures companion legumes must survive and persist with grasses to alleviate N deficiency.

Materials & Methods

- Six dryland pastures were measured from 2002-2008.
- Dry matter (DM) was determined from exclosure cages.
- Sown pasture components were analysed for N% by NIRS.

Results

- Cocksfoot (CF)/Subterranean clover pastures had the highest N and DM yields.
- Ryegrass/white clover (Wc) pastures had the lowest N and DM yields due to poor persistence (35% of total DM) in this dryland (624 mm/yr) environment.

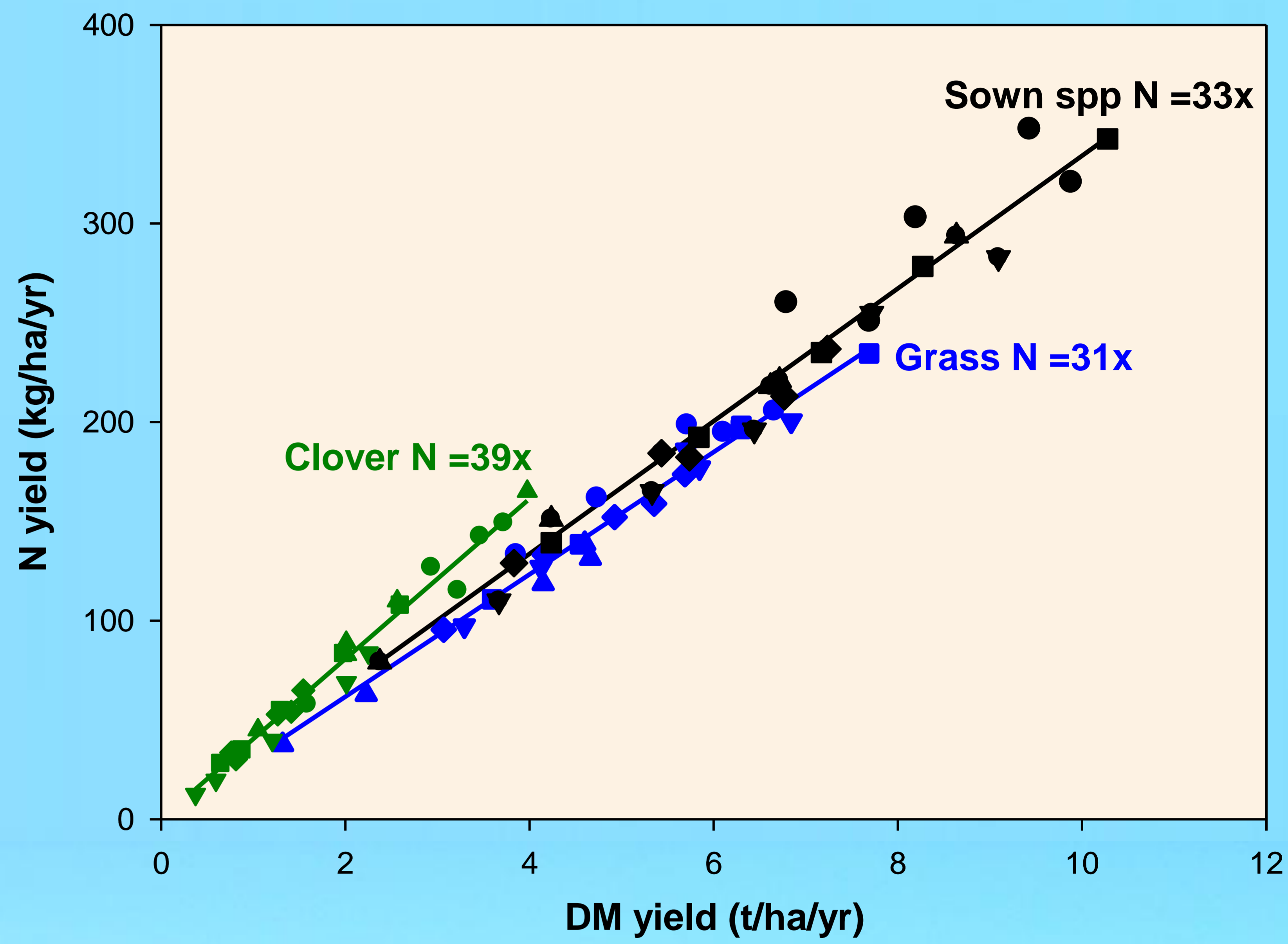


Fig 1. N yield (kg N/ha/yr) of green herbage of sown clover (green), sown grass (blue) and grass+clover (black). Pastures were Cocksfoot/Subterranean clover (●), Cocksfoot/Balansa clover (▼), Cocksfoot/White clover (■), Cocksfoot/Caucasian clover (◆) and Ryegrass/White clover (▲) at Lincoln University, Canterbury, New Zealand.

