

# Pasture species options

- agronomy and grazing management

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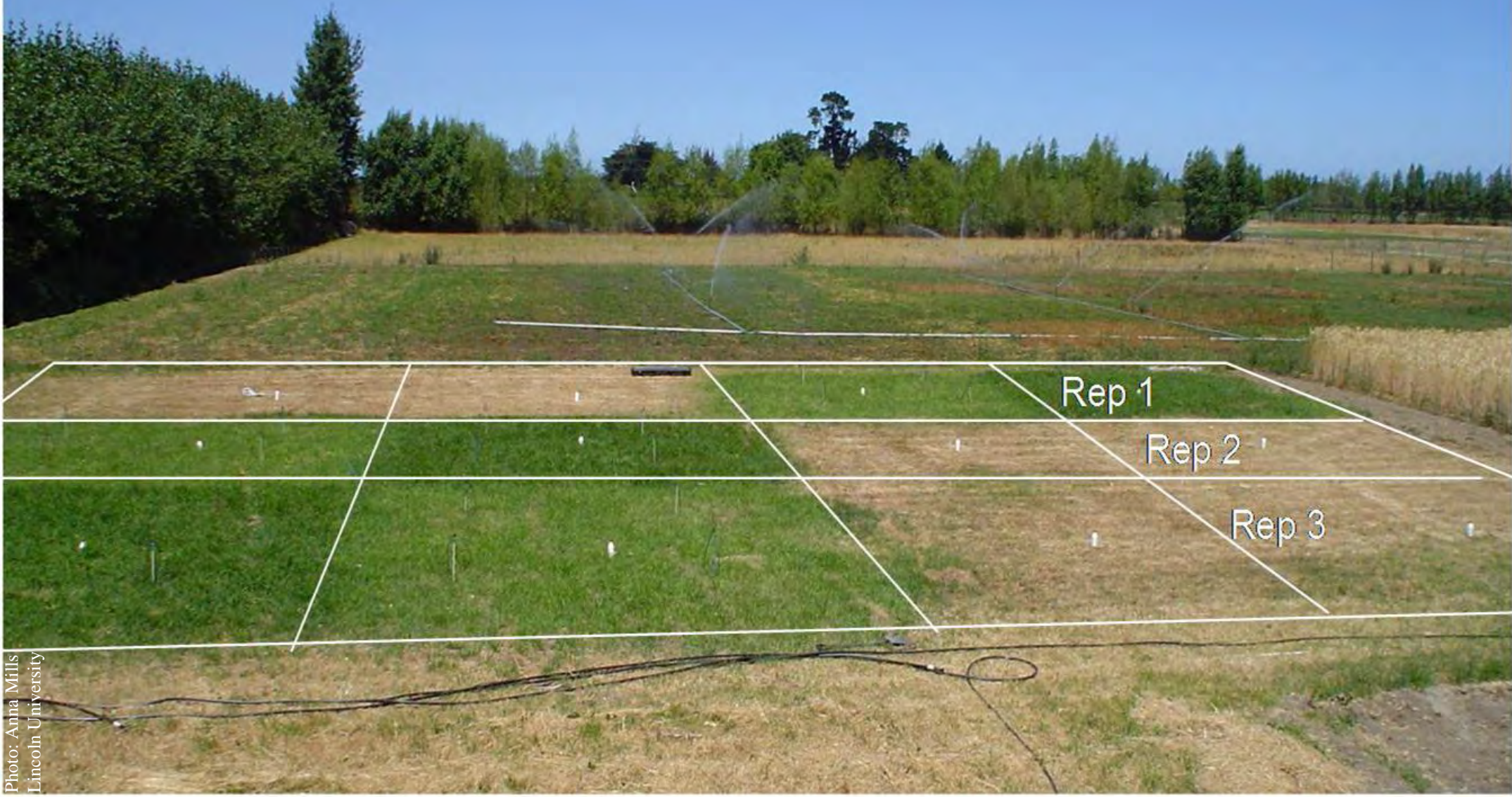


Cocksfoot

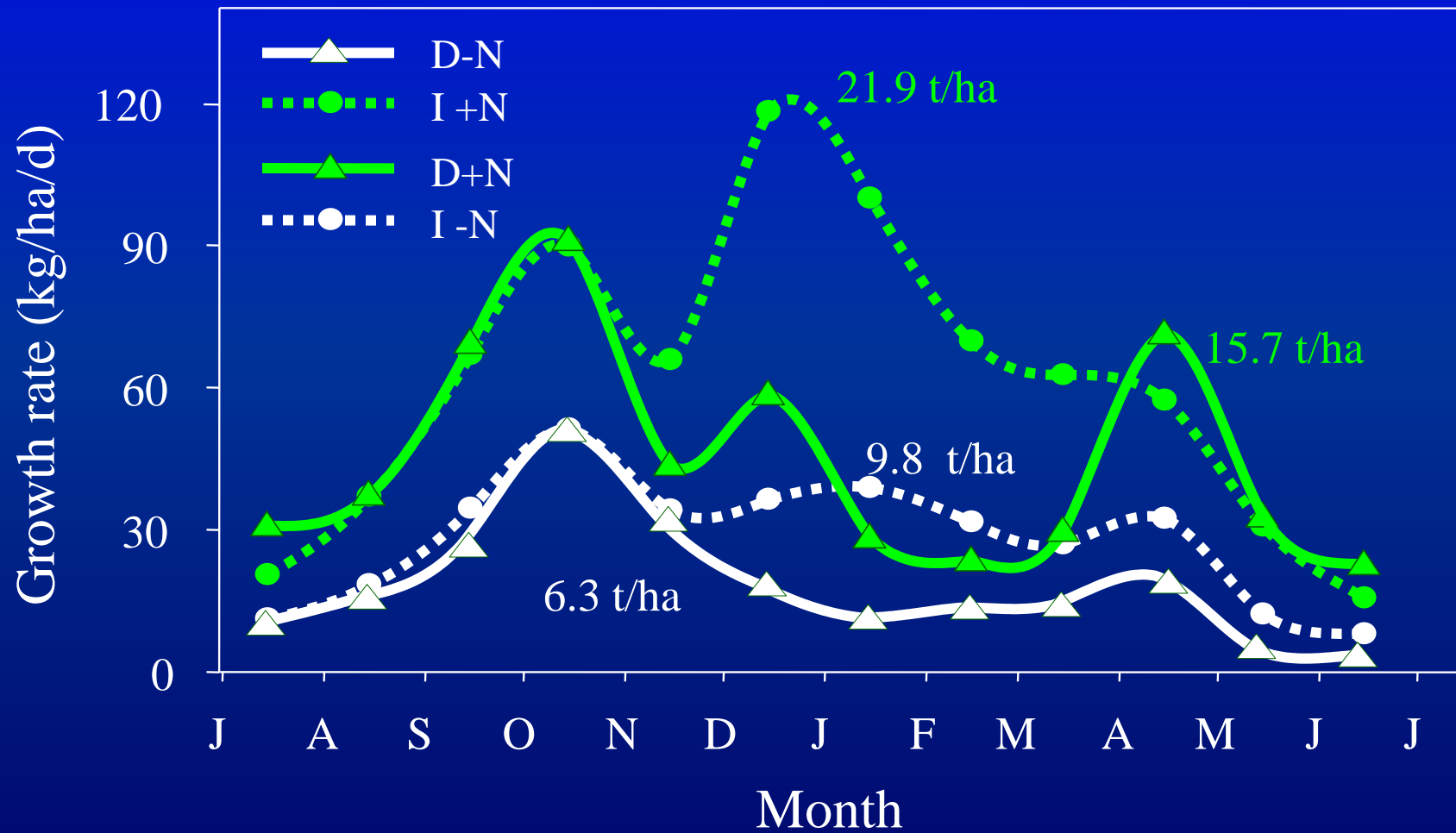
Perennial ryegrass



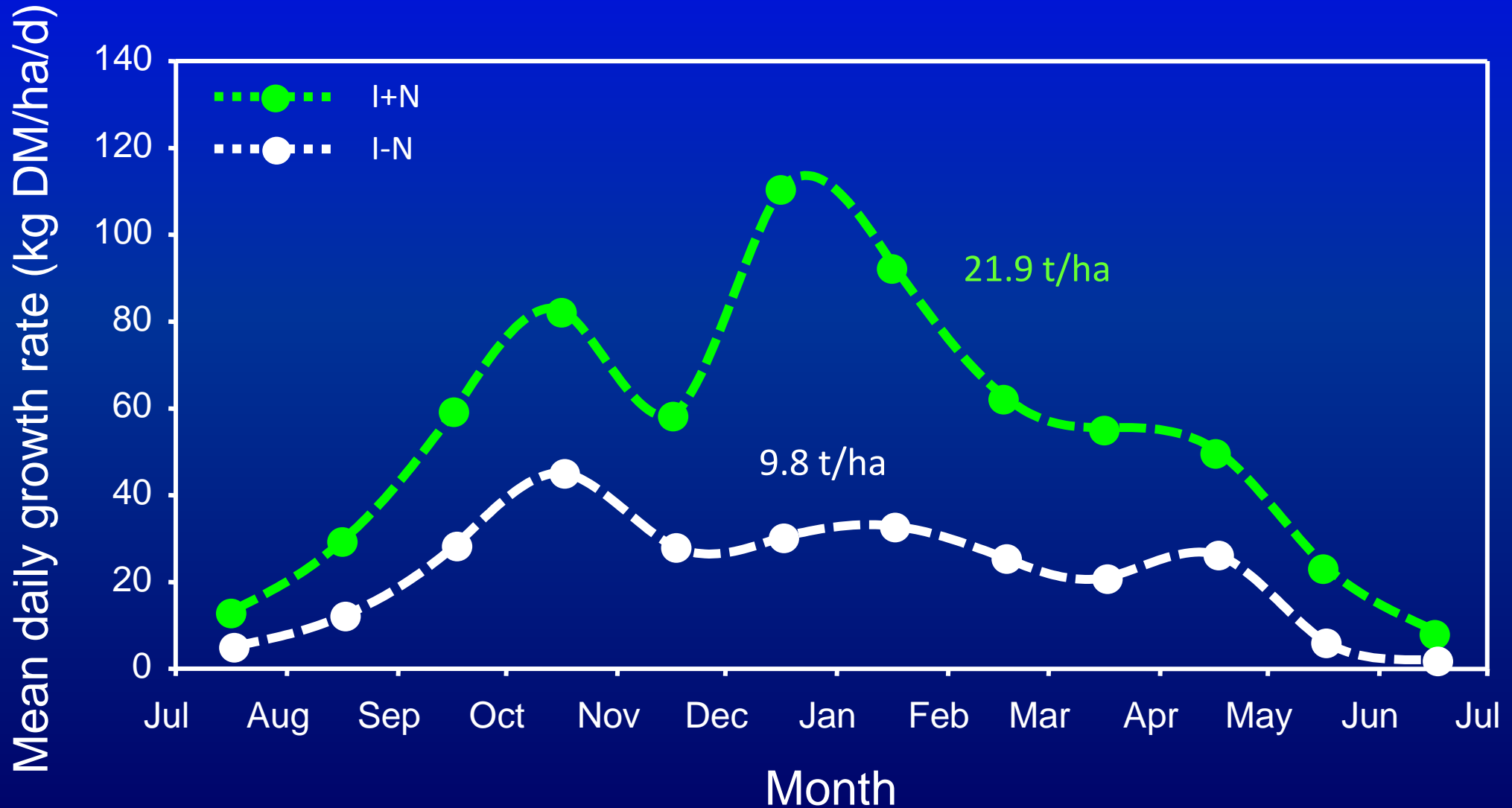
# Experiment site



# Growth rates (2 year means)

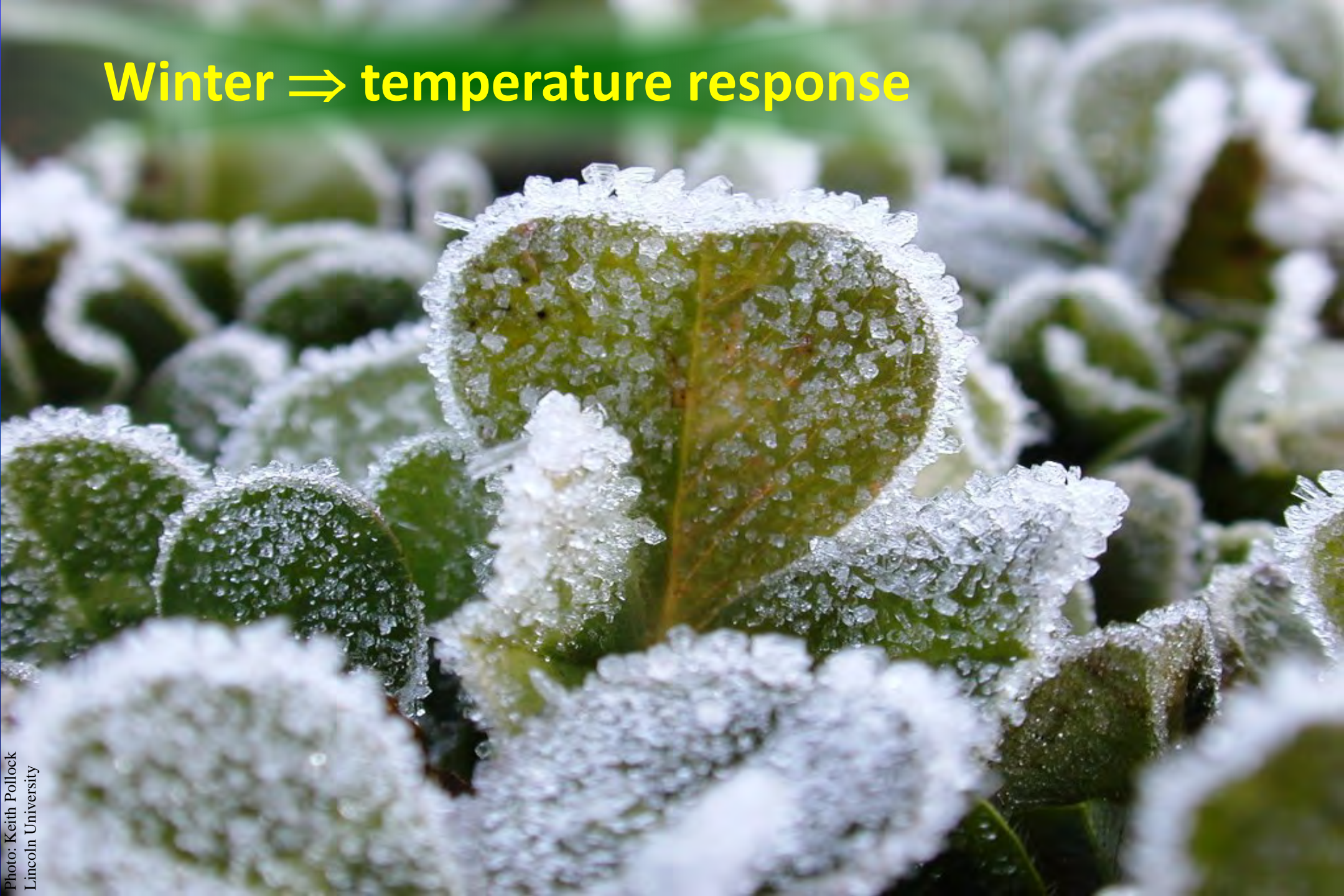


# Pasture Growth Rates – 2 yr mean

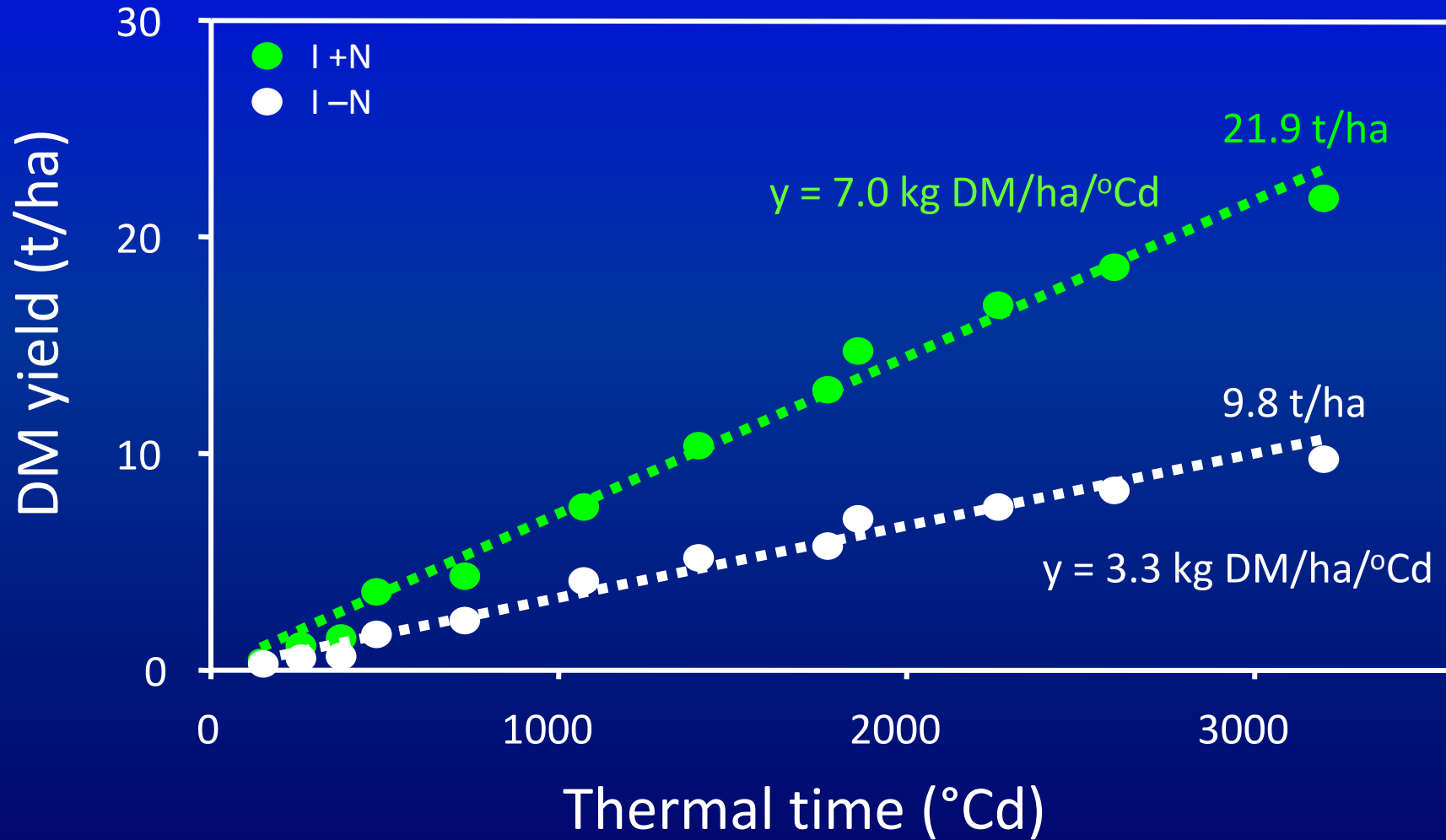




**Winter  $\Rightarrow$  temperature response**



# The Nitrogen gap



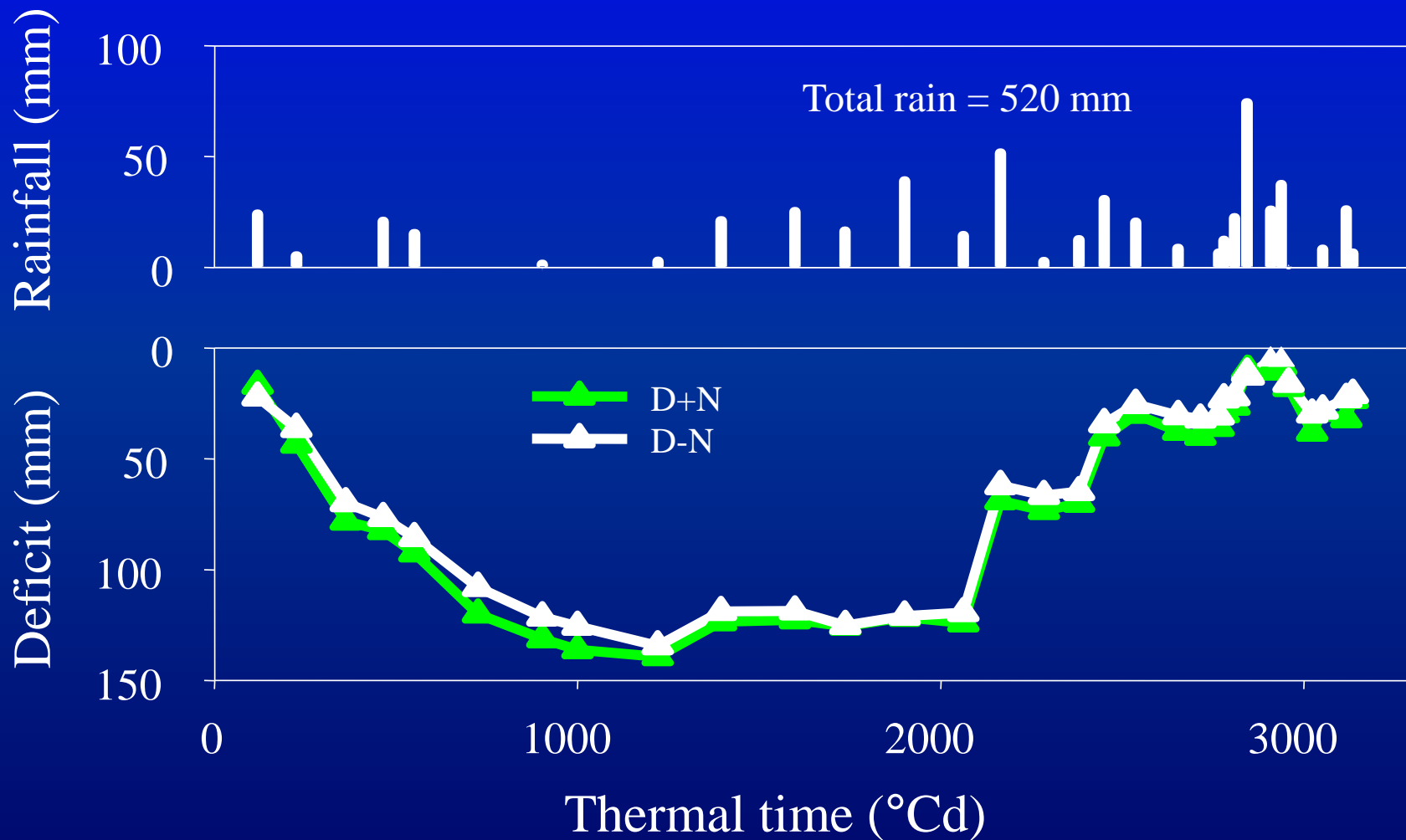


Summer  $\Rightarrow$  moisture response

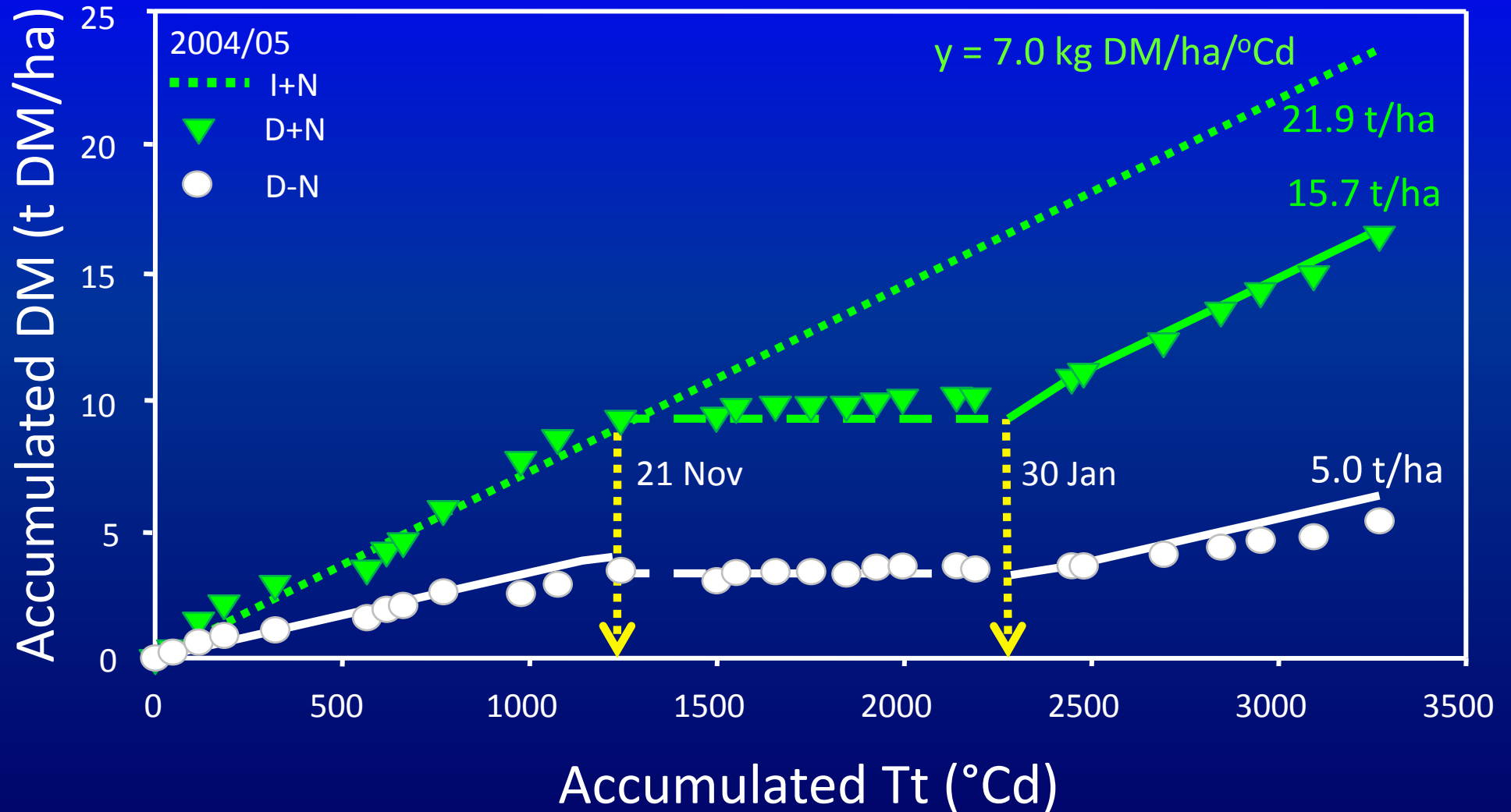




# Soil moisture deficit 2003/04



# The Nitrogen gap







**Rg/Wc**

**Lucerne**

**CF/Sub**

**CF/Balansa**

**CF/Cc**

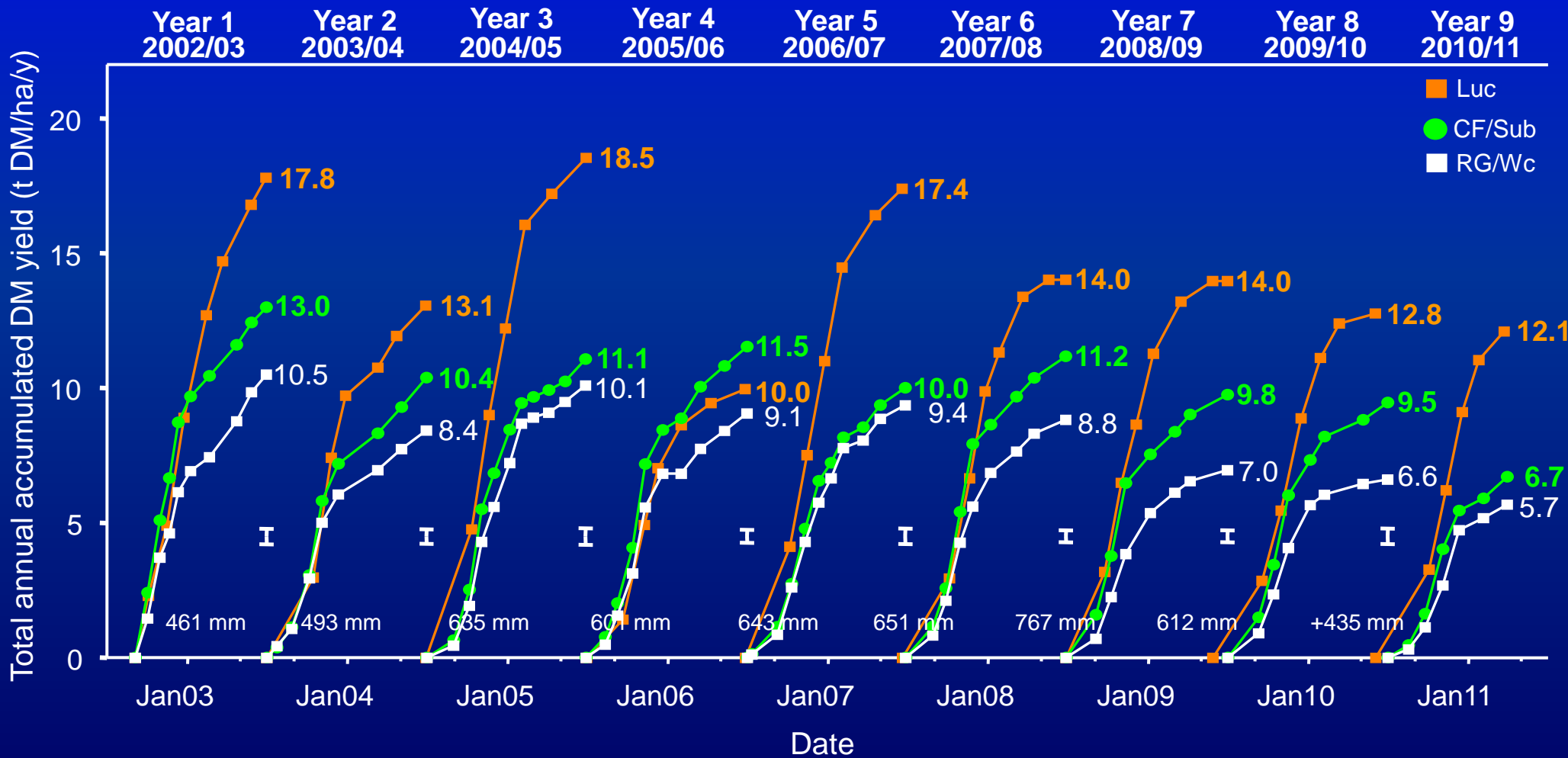
**CF/Wc**

**‘MaxClover’**



# 'MaxClover' Total DM Yields

(to 30 March 2011)





# RG/Wc pastures

Unsown species <5% in Year 1 .....>45% in Year 6

Spring  
Year 2



Summer  
Year 4



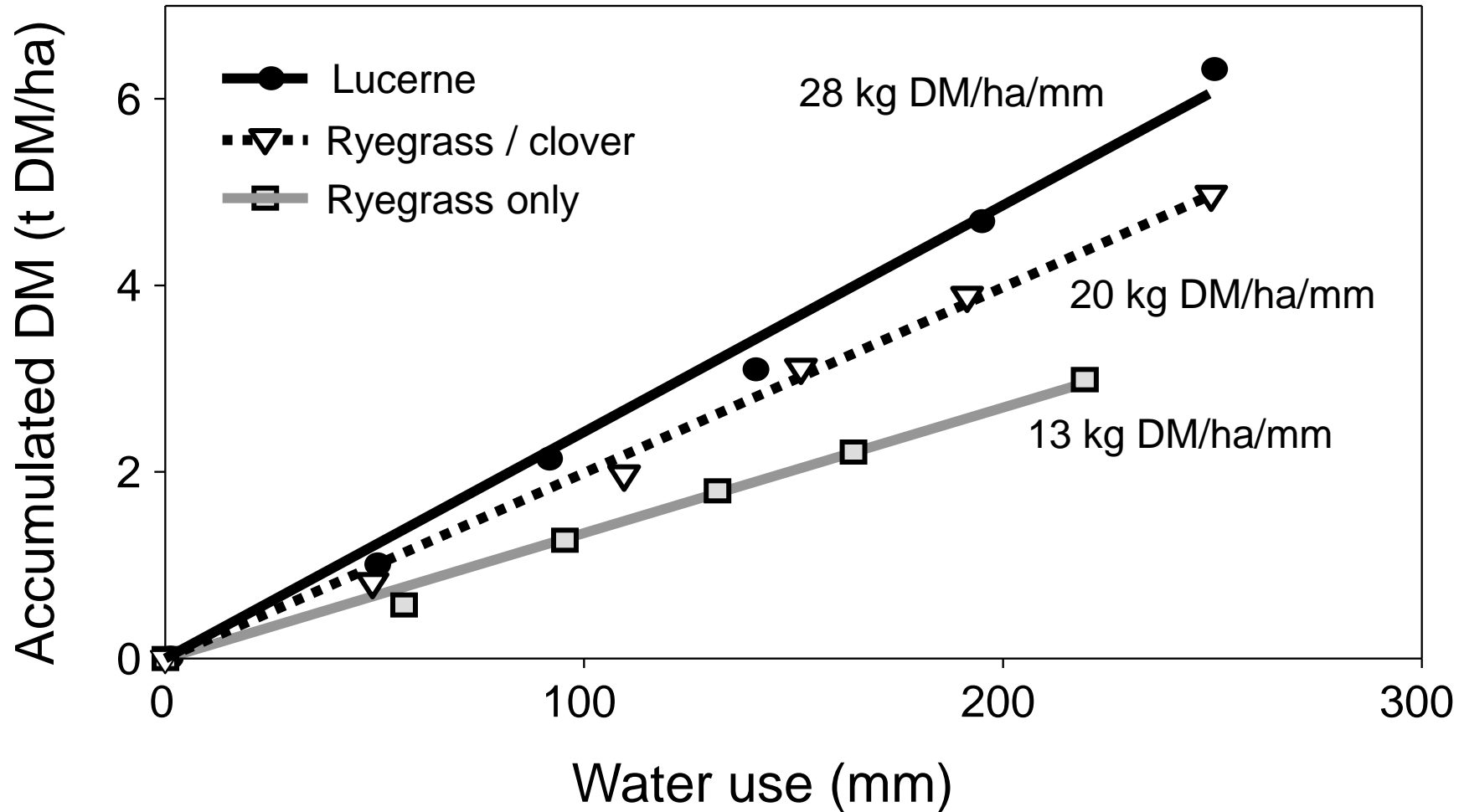


# Lucerne pastures





# Spring WUE: legume = (nitrogen)



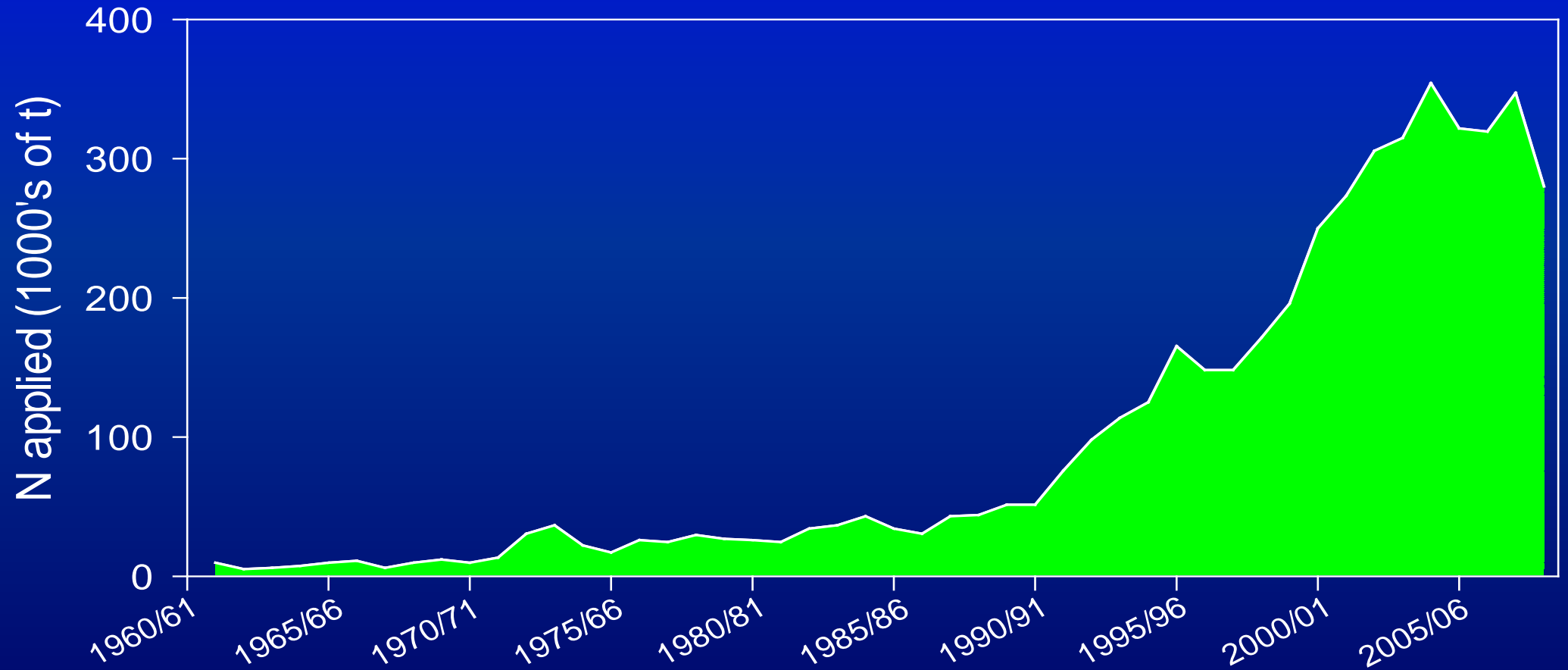
# Nitrogen deficient pasture



1000 kg N/ha



# Nitrogen fertiliser use



# References

- Mills, A., Moot, D. J. and McKenzie, B. A. 2006. Cocksfoot pasture production in relation to environmental variables. *Proceedings of the New Zealand Grassland Association*, 68, 89-94.
- Moot, D. J. 2012. An overview of dryland legume research in New Zealand. *Crop and Pasture Science*, **(In Press)**.
- Moot, D. J., Brown, H. E., Pollock, K. and Mills, A. 2008. Yield and water use of temperate pastures in summer dry environments. *Proceedings of the New Zealand Grassland Association*, 70, 51-57.
- New Zealand Fertiliser Manufacturers' Research Association. 2011. Annual update (New Zealand Fertiliser Manufacturers' Research Association). 15 pp. Date Accessed: 5/5/2011. Online: <http://www.fertresearch.org.nz/resource-centre/annual-updates> . Last Updated: Dec 2009.



# **Pasture Species Options**

## **- agronomy and grazing management**

Professor Moot gave this presentation at:

**Lincoln for Seed Force**

On:

**31 July 2012**