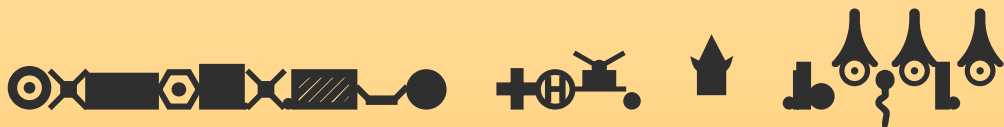




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Variation in growth and carbon sequestration of hardwood species in Queensland

Trinh Huynh, David Lee
University of the Sunshine Coast



Timber



Source: Wood Central.

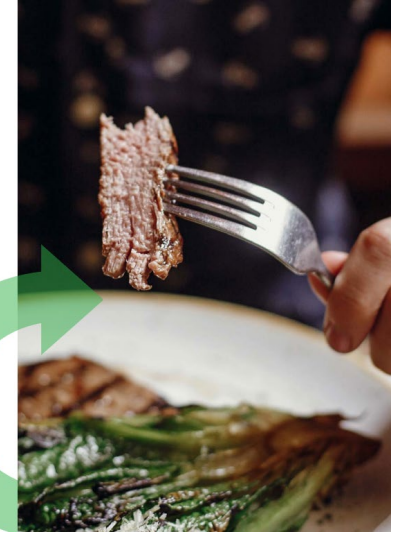
Timber + cattle



Timber + Cattle + Carbon

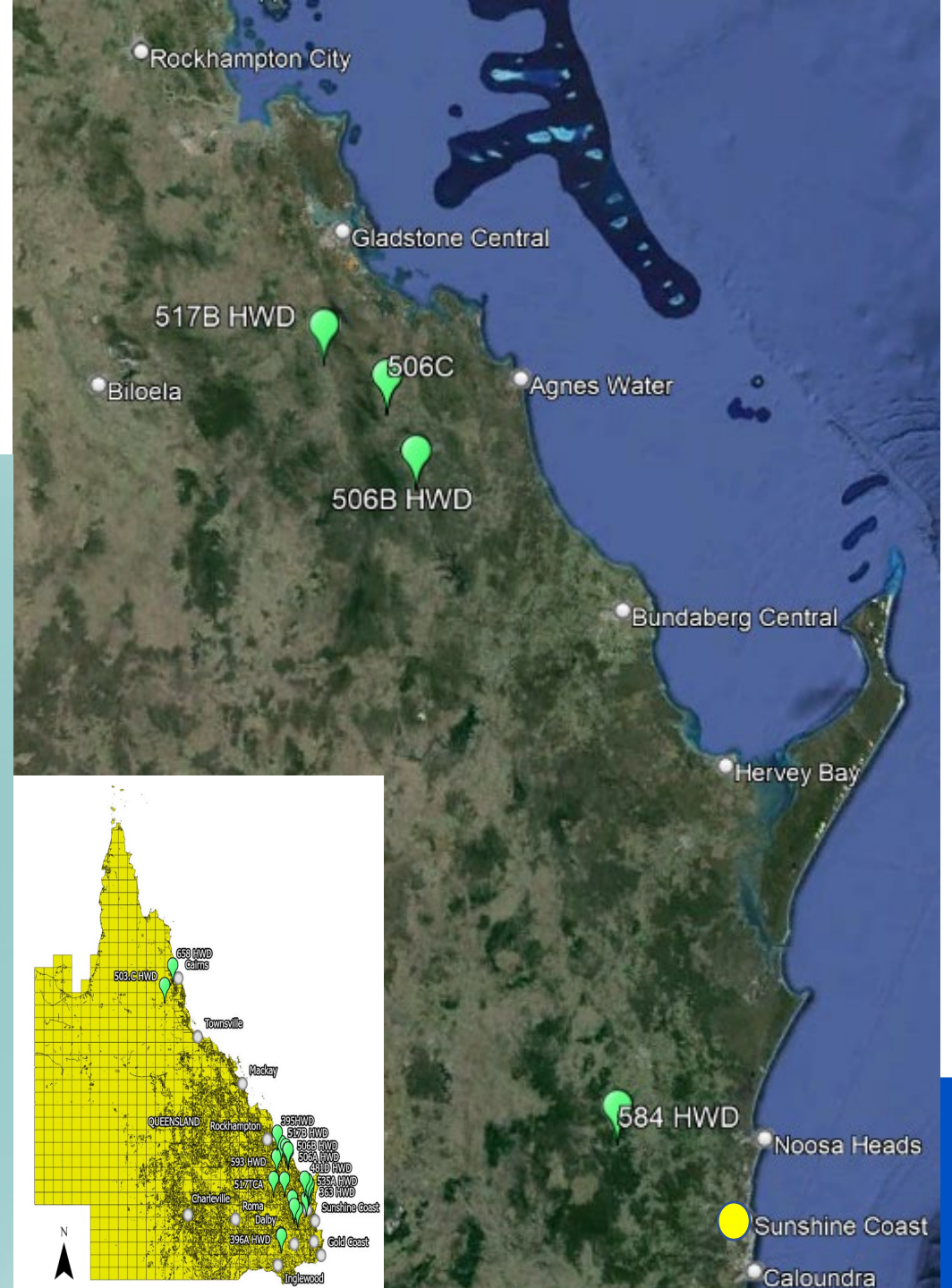
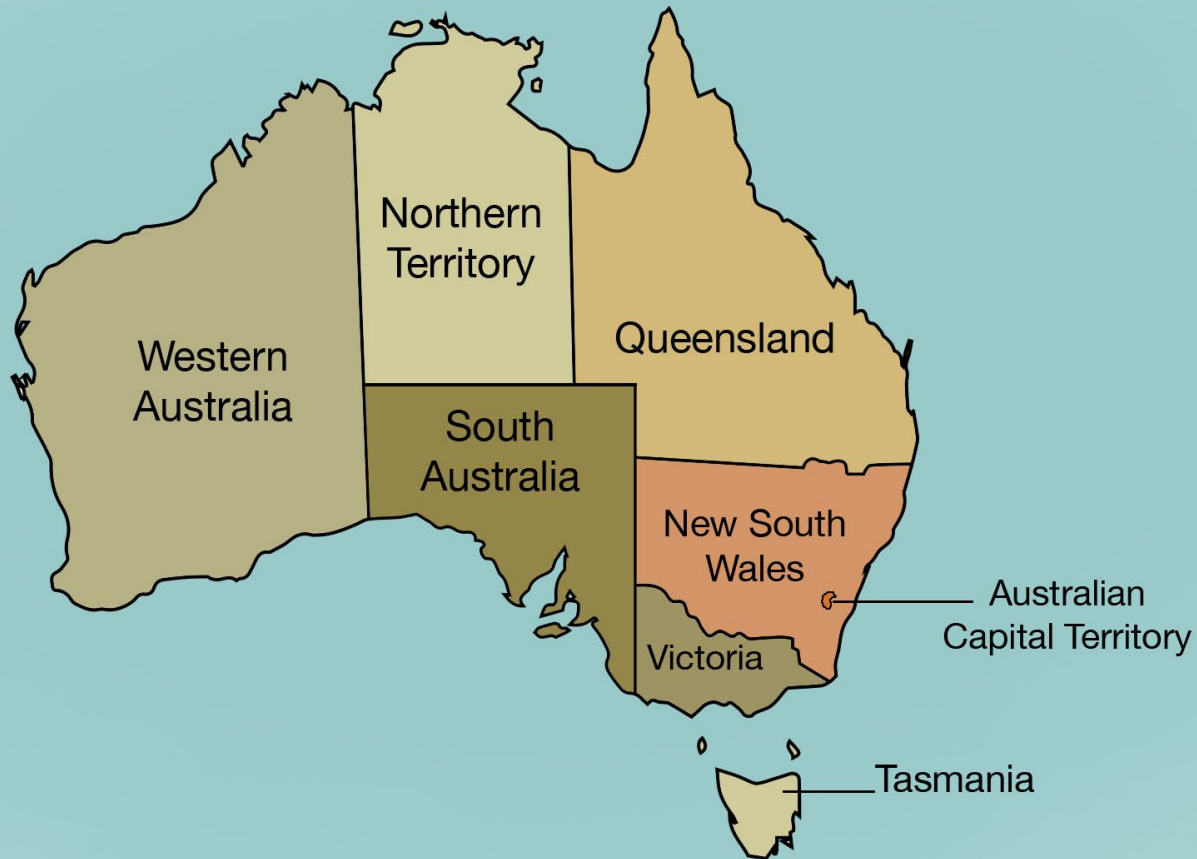
The Australian Red Meat Industry's
Carbon Neutral by 2030 Roadmap

CN
30

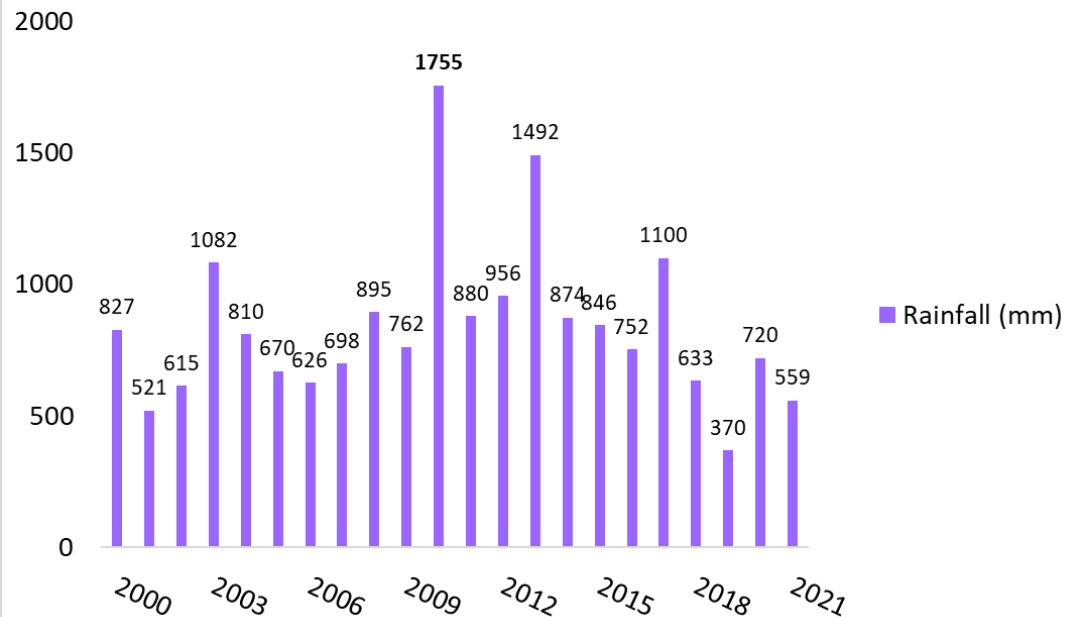


Study areas

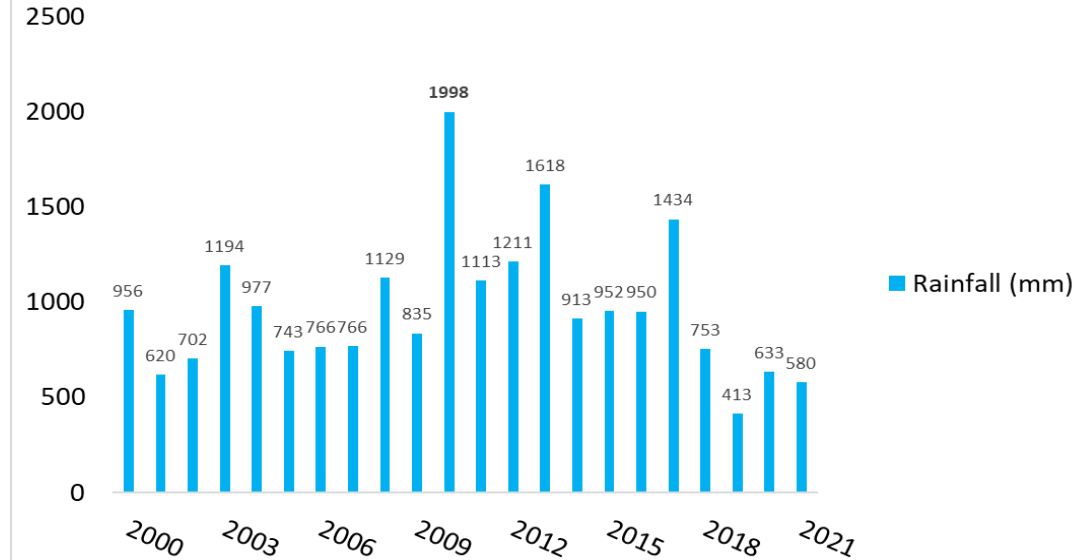
- 517B- West of Gladstone
- 506C – 506B Miriam Vale
- 584 HWD near Imbil



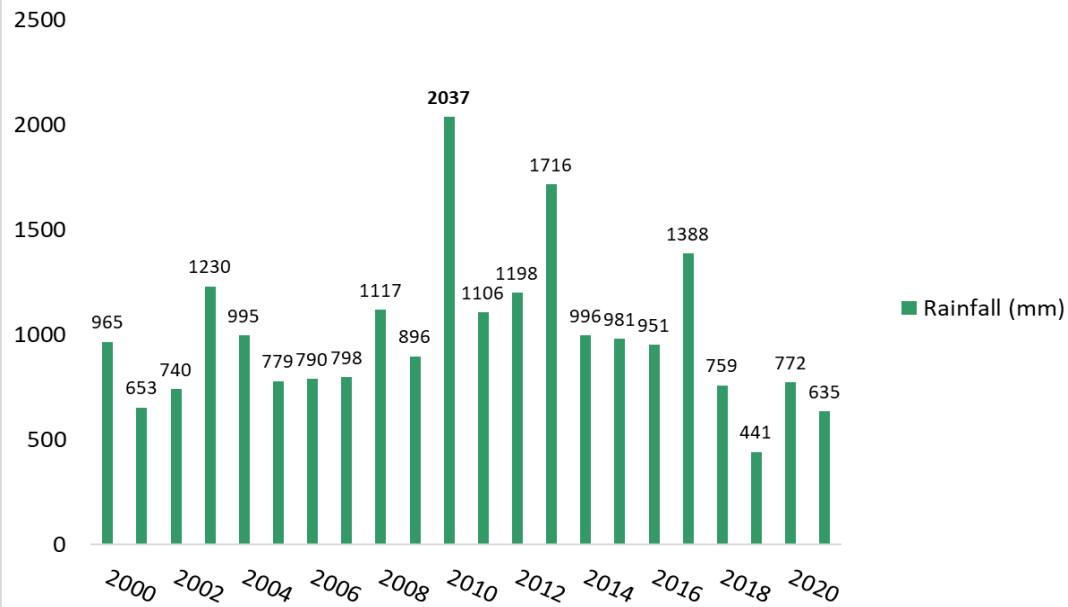
Average rainfall (mm) in 517B



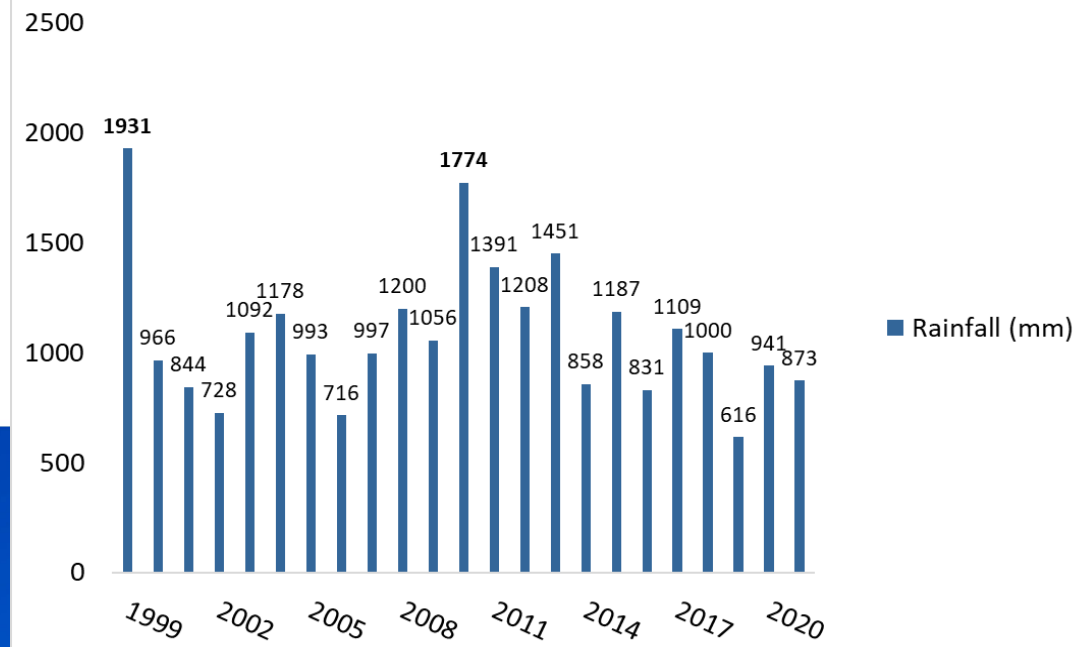
Total rainfall (mm) in 506B



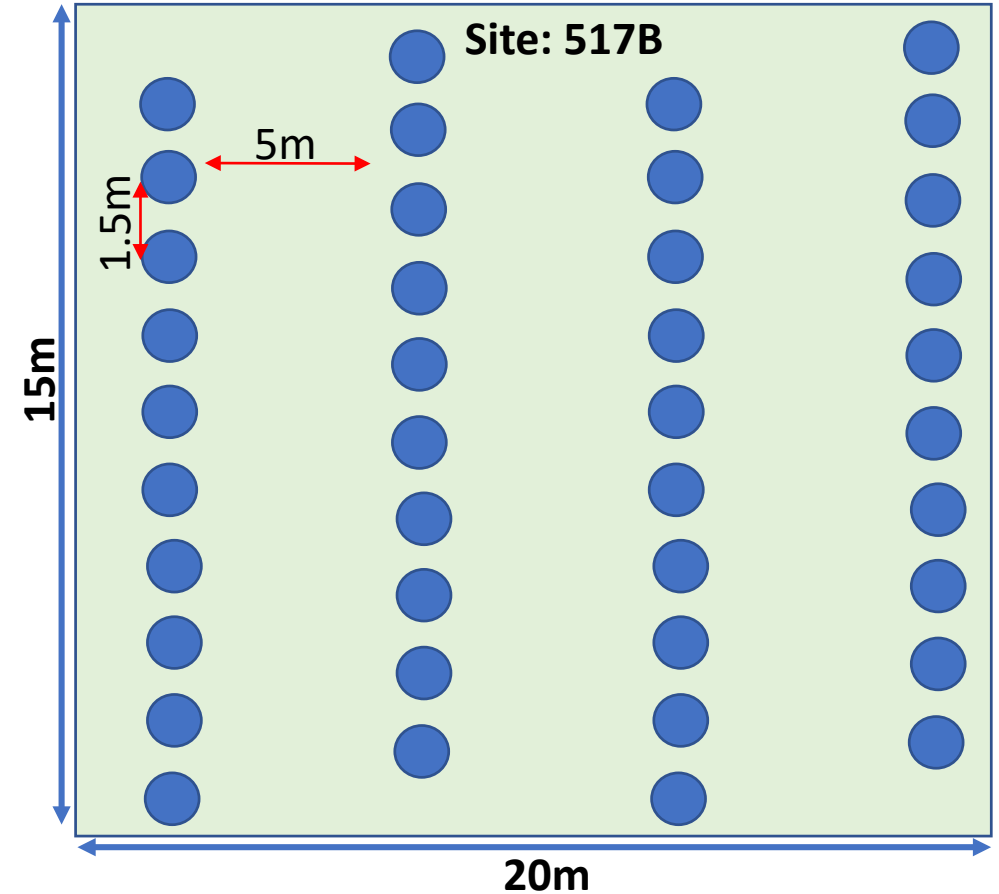
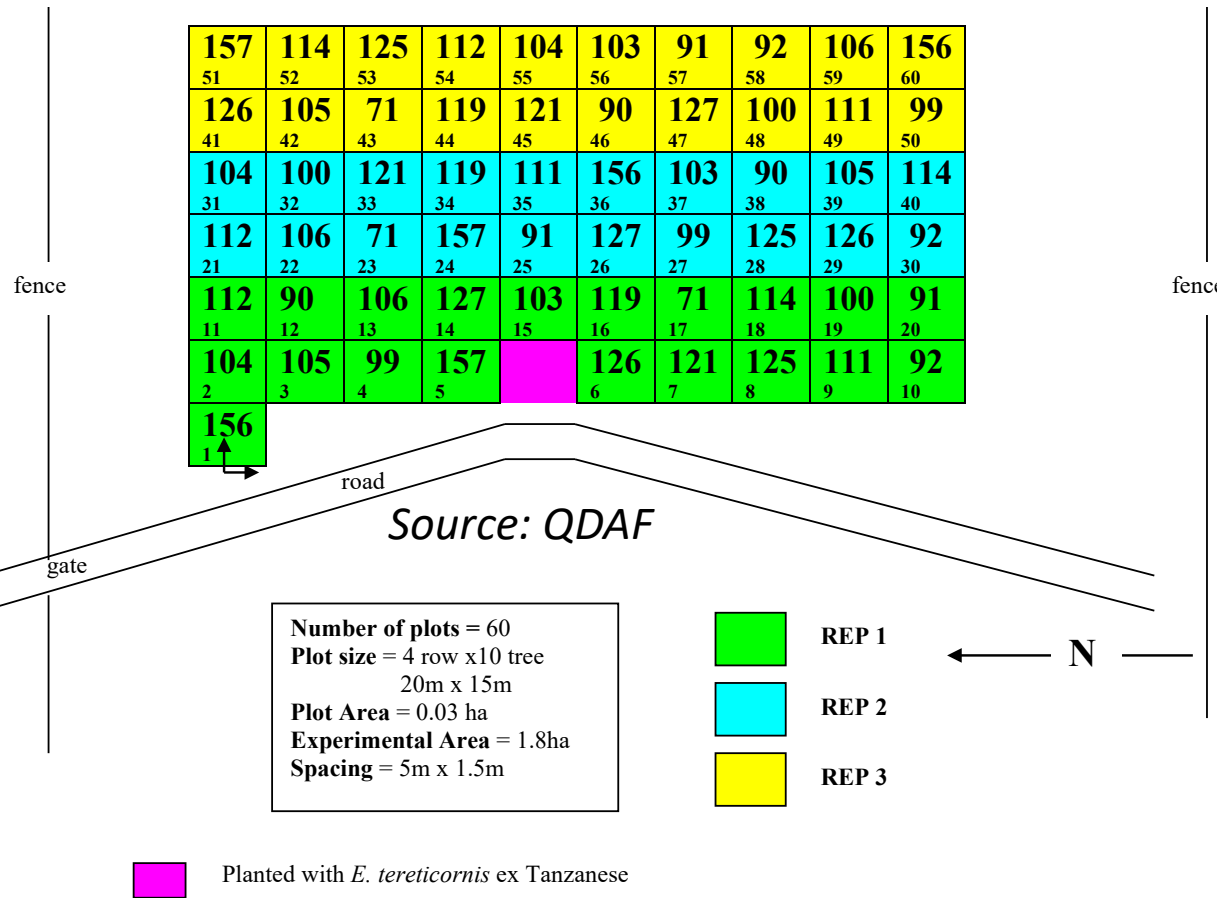
Average rainfall (mm/year) in 506C



Average rainfall (mm/year) in 584

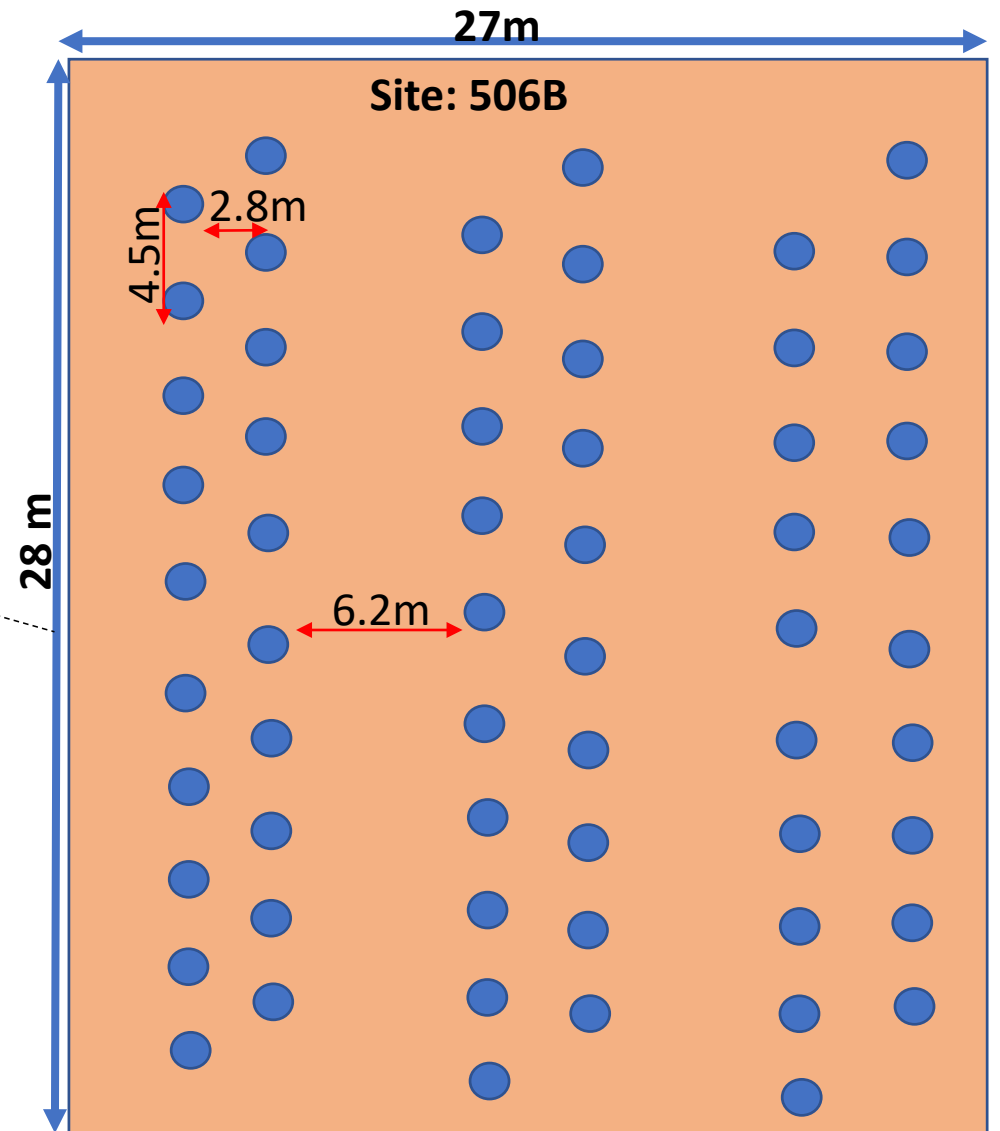
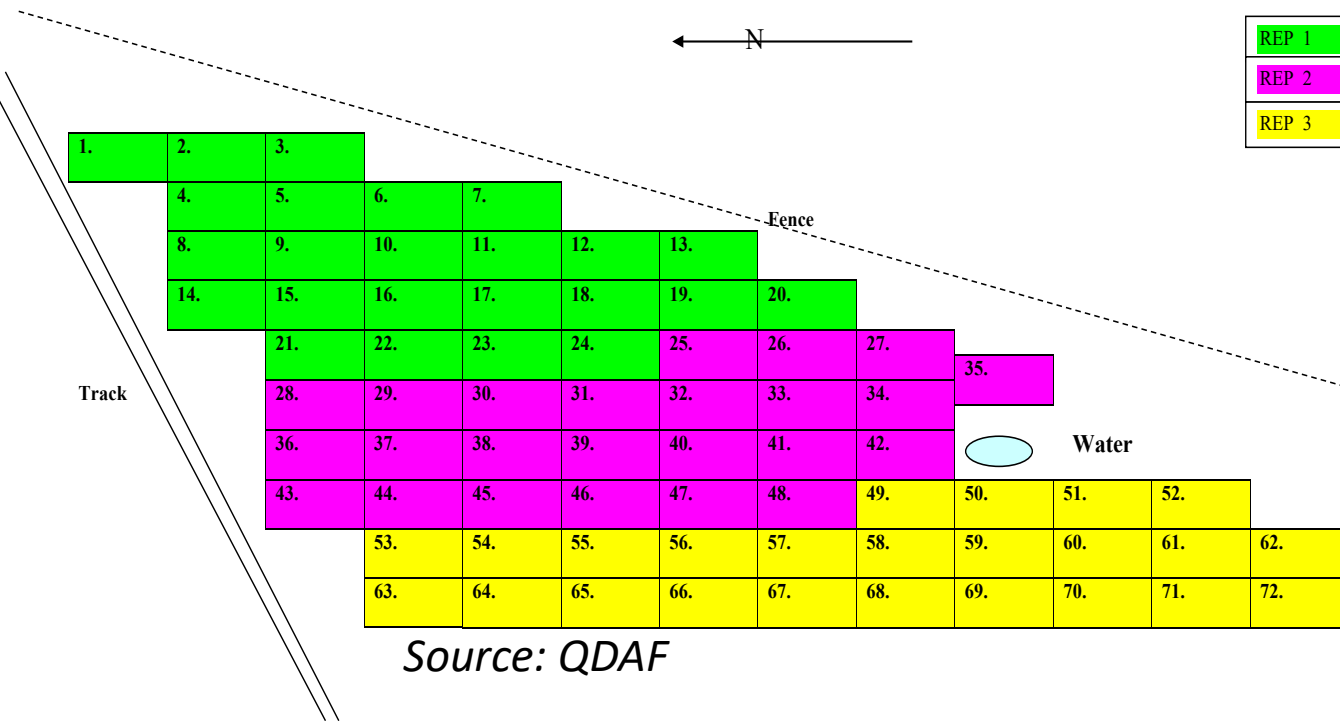


Design and layout: 517B – 20 taxa



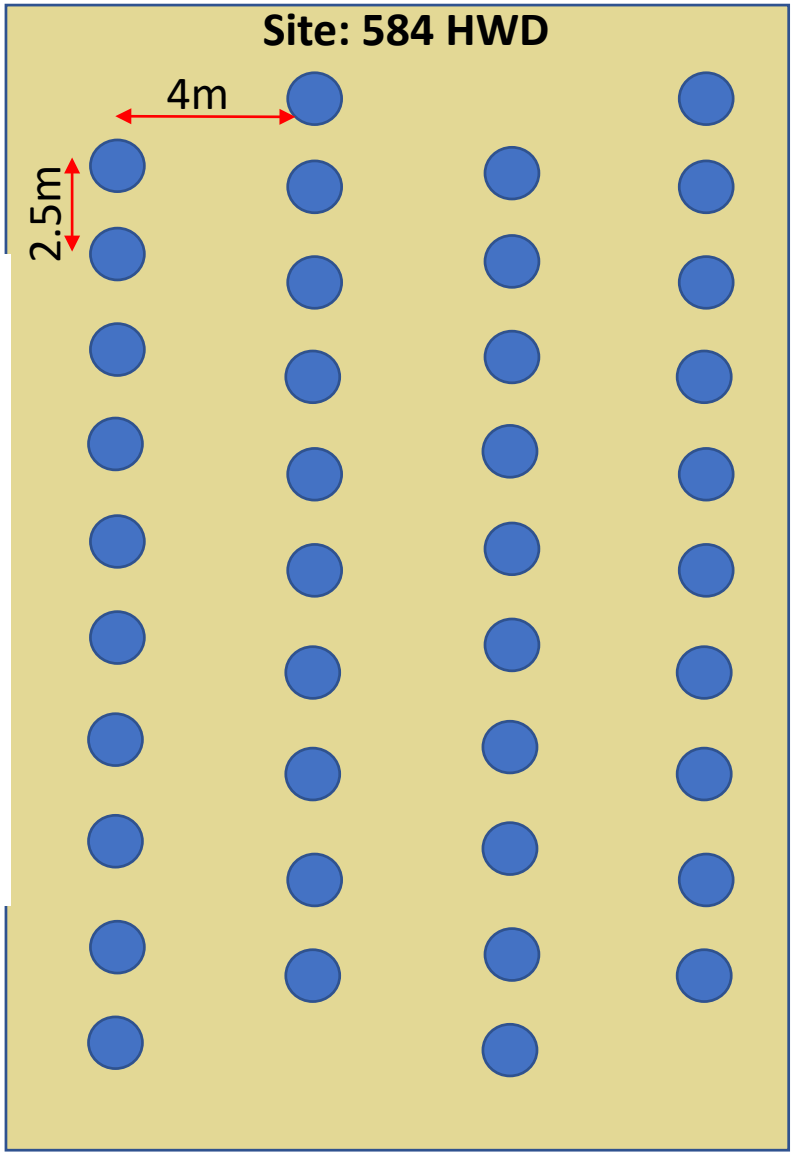
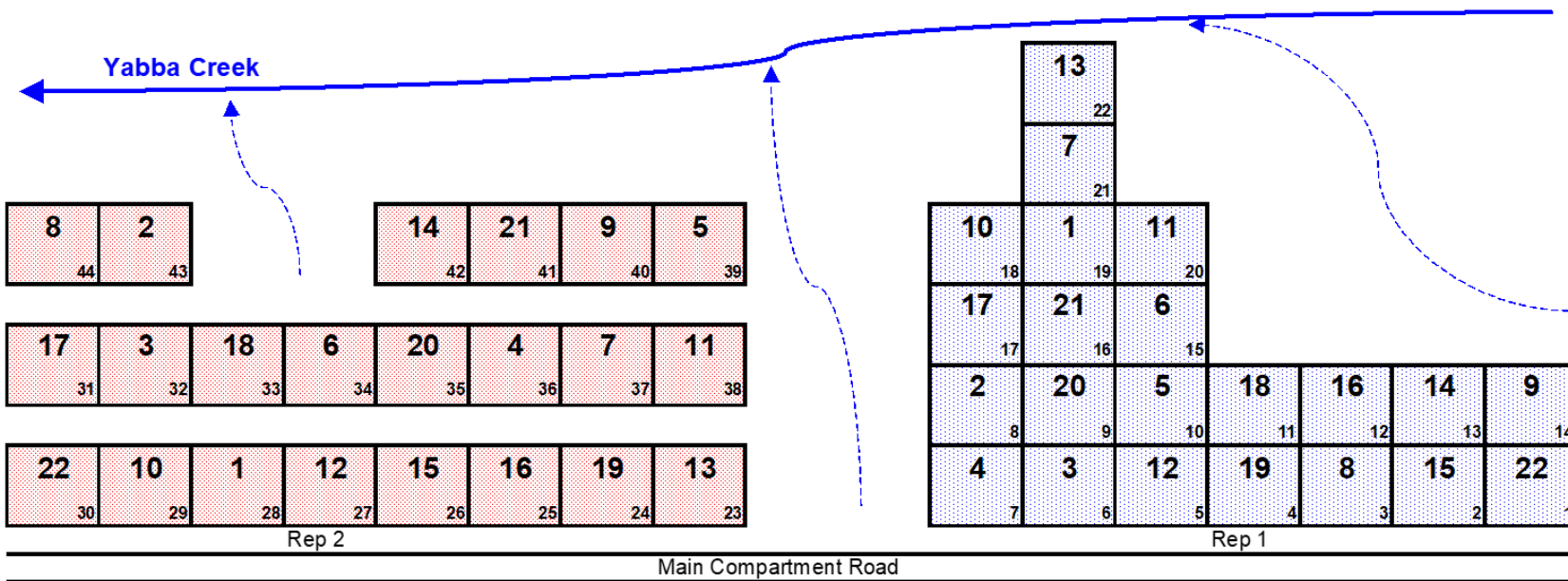
Planted in 2001; Stocking = 1333 trees/ha; 48 trees/taxa:

Design and layout: 506B – 24 taxa



Planted in 2000; Stocking = 794 trees/ha
>100 trees/taxa

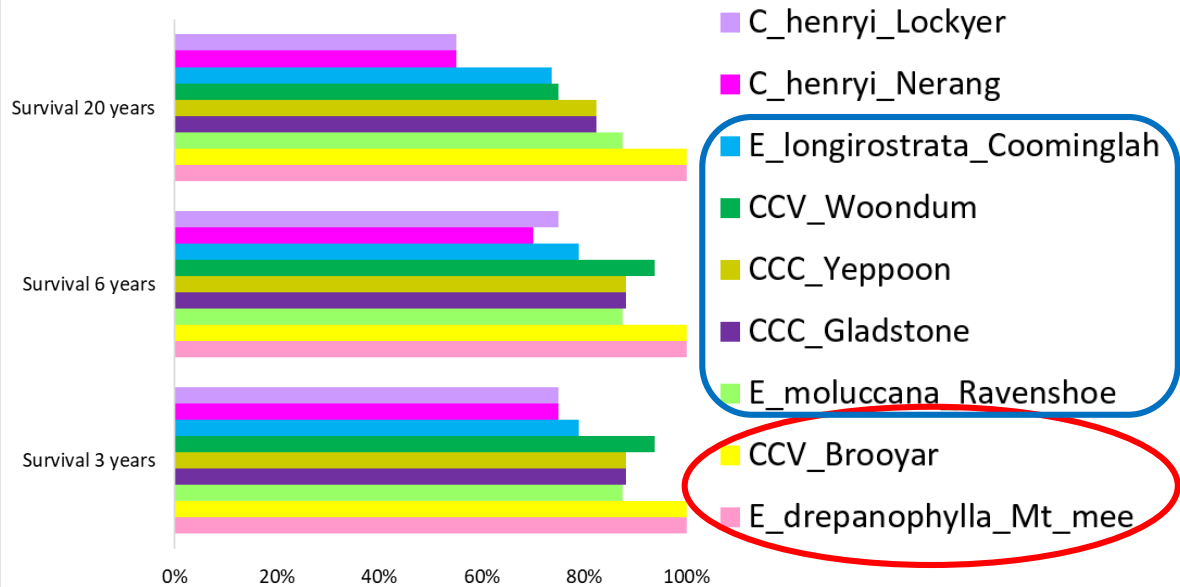
Design and layout: 584 HWD – 22 taxa



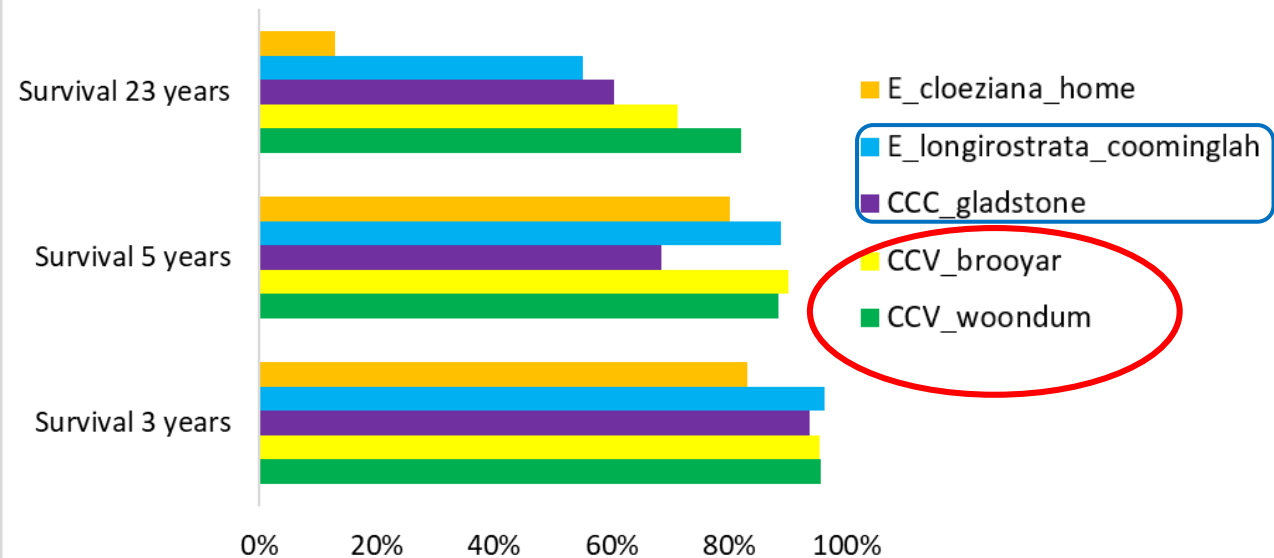
Source: QDAF

- Planted in 1999
- Stocking = 1000 trees/ha
- 32 trees/taxa

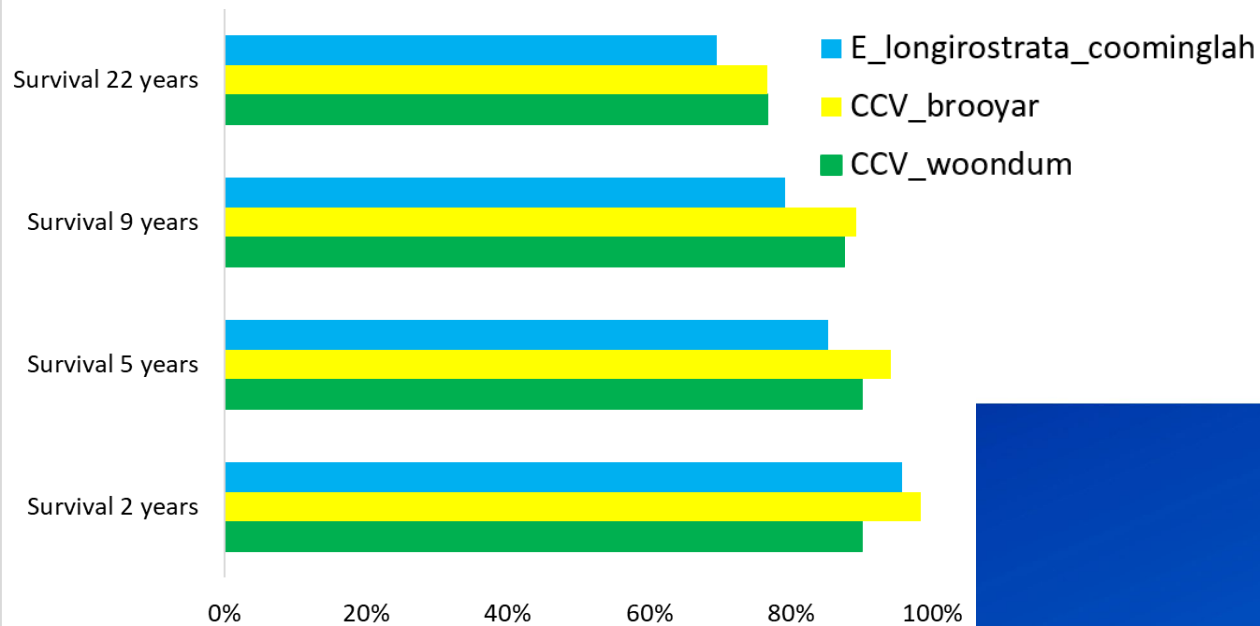
Survival 517B: 9/20 taxa



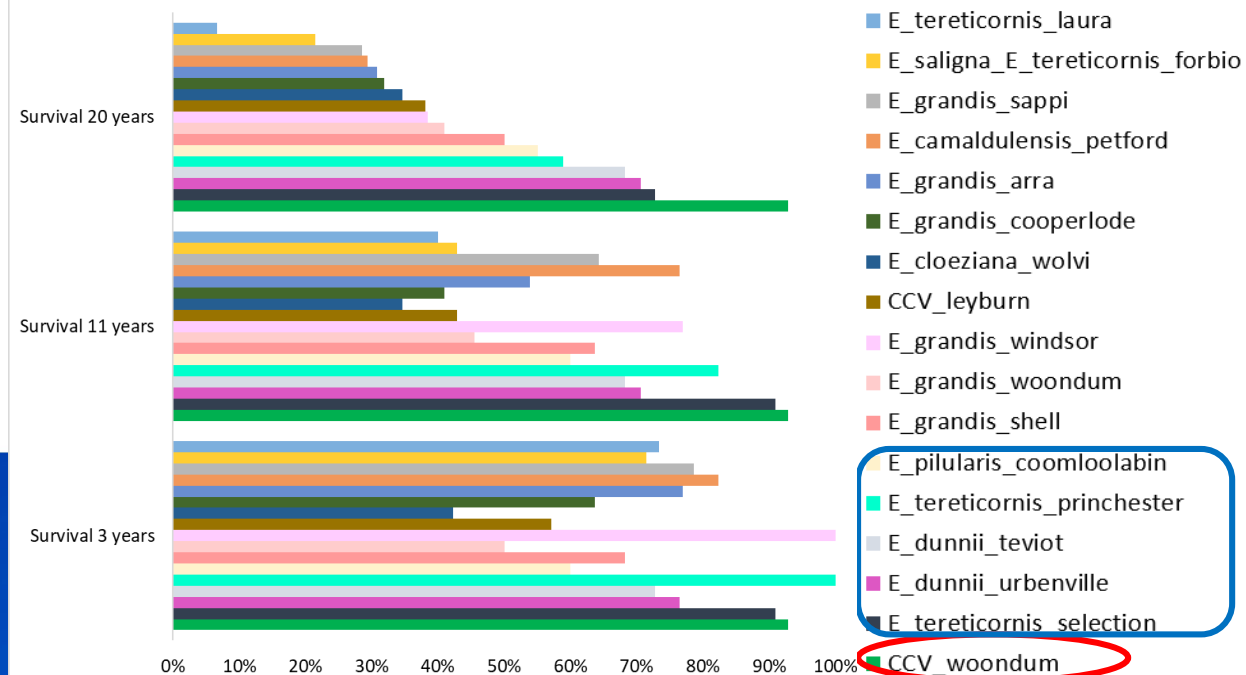
Survival 506B: 5/24 taxa



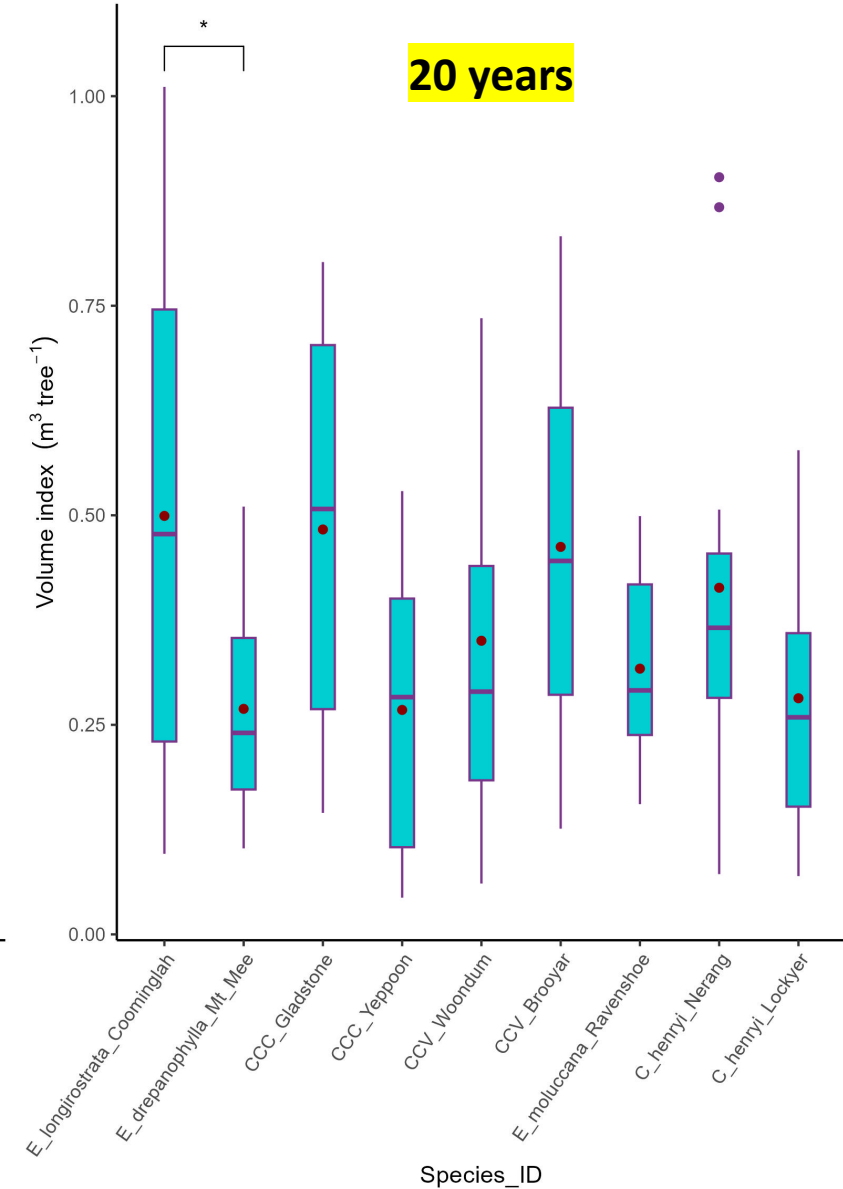
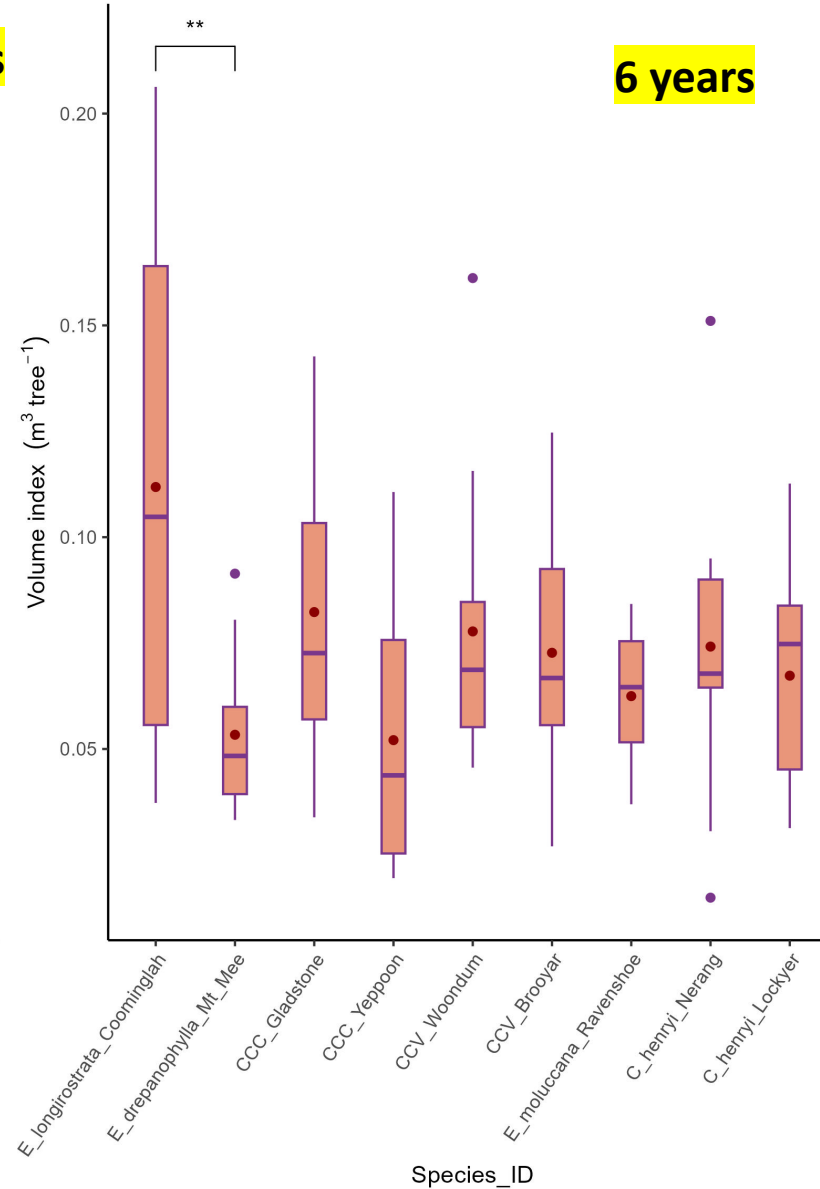
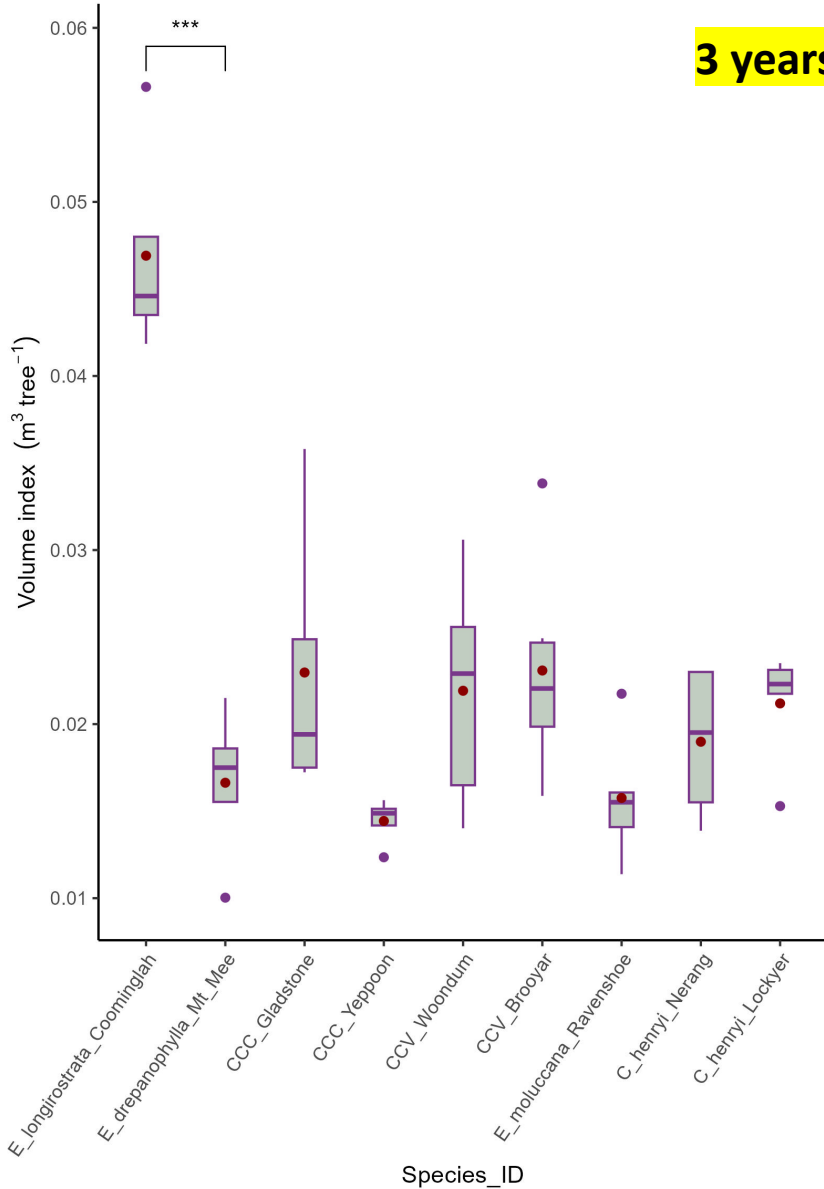
Survival 506C : 3/24 taxa



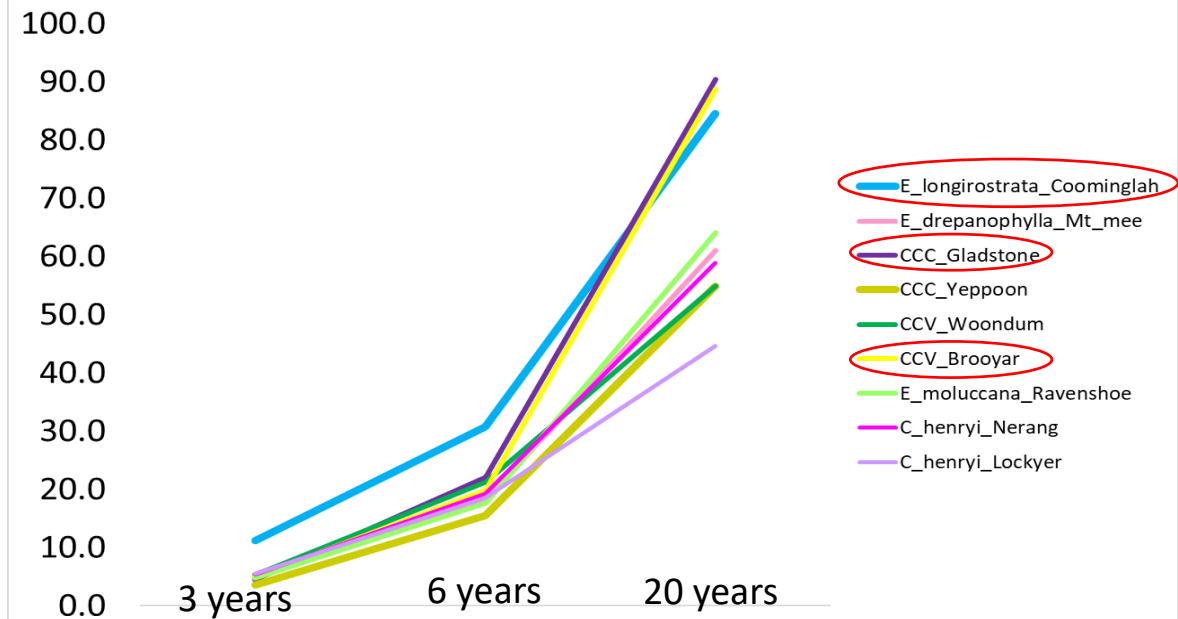
Survival 584 HWD : 17/22 taxa



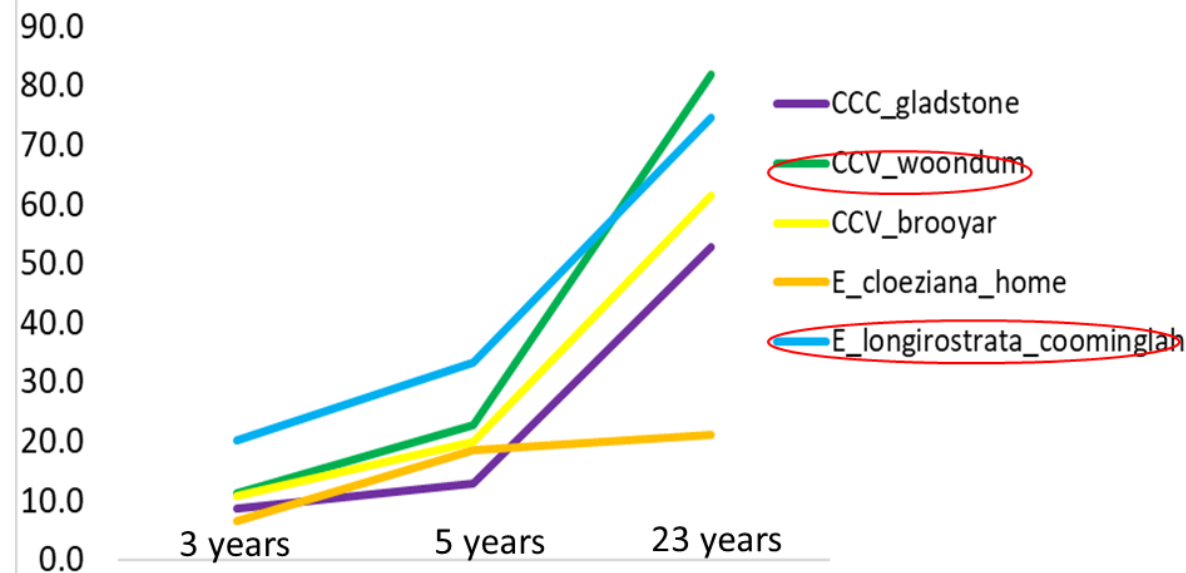
Mean annual volume increment ($\text{m}^3/\text{tree}/\text{year}$): 517B



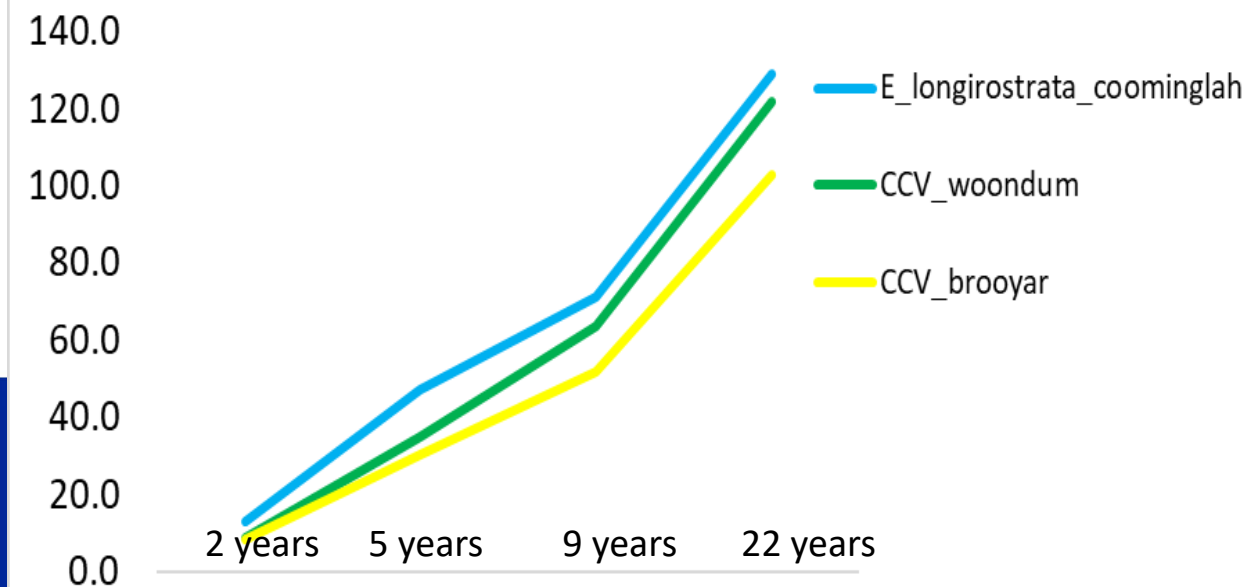
Carbon sequestration (t/ha): 517B



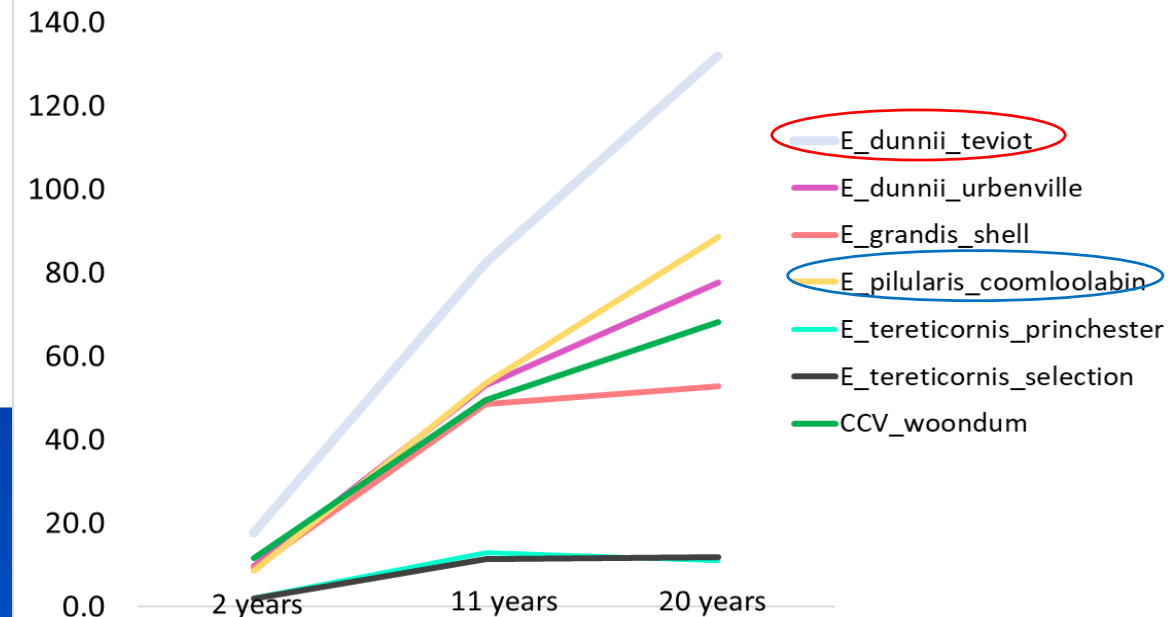
Carbon sequestration (t/ha): 506B



Carbon sequestration (t/ha): 506C



Carbon sequestration (t/ha): 584 HWD



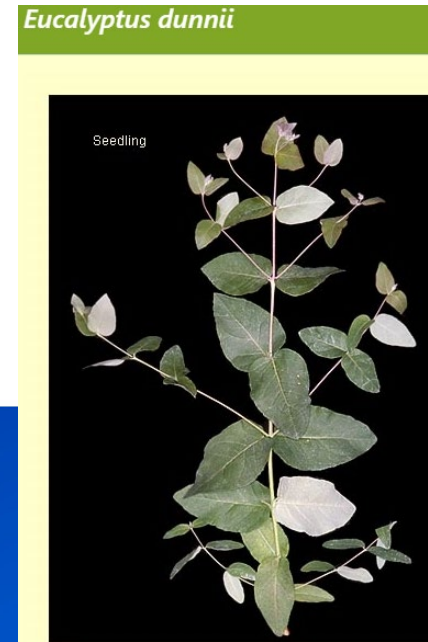
Conclusions

Best species for timber and carbon:

- Low rainfall zone (3 taxa):
 - CCC_Gladstone;
 - CCV_Brooyar;
 - *E. longirostrata*_Coominglah;
 - *E. drepanophylla*: high survival but slow growth
- Medium rainfall zone (3 taxa):
 - *E. longirostrata*_Coominglah;
 - CCV_Woodum;
 - CCV_Brooyar
- High rainfall zone (2 taxa):
 - *E. dunnii*_Teviot;
 - *E. pilularis*_Coomloolabin
- Long-term reliable data



Photos: EUCLID



Acknowledgement



- UniSC Internal Funding Scheme – SPARK Professional Development
- Department of Forest Biomaterials and Technology – SLU
- Queensland Department of Agriculture and Forestry (QDAF)
- Meat and Livestock Australia



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