

Growing and managing *Eucalyptus* on dryland sites

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February 2021



Practical guide for growing *Eucalyptus*

Best Practice with Farm Forestry Timber Species

No. 2: EUCALYPTS



NZFFA Electronic Handbook Series

Ian Nicholas (Editor)

In General:

- More site sensitive than radiata
- Doesn't like wet feet
- Doesn't do well in phosphorus deficit or highly erodible sites
- Some eucalypts can succeed at a site where others can't
- Pre- and post-establishment management is essential!

Challenges with non-radiata species

- Limited interest from big players = limited funding
- Failures in the Central North Island
- Limited plot data
- Piecemeal and uncoordinated research
- NZDFI is the most focused effort in *Eucalyptus* research in years

Plot distribution limited

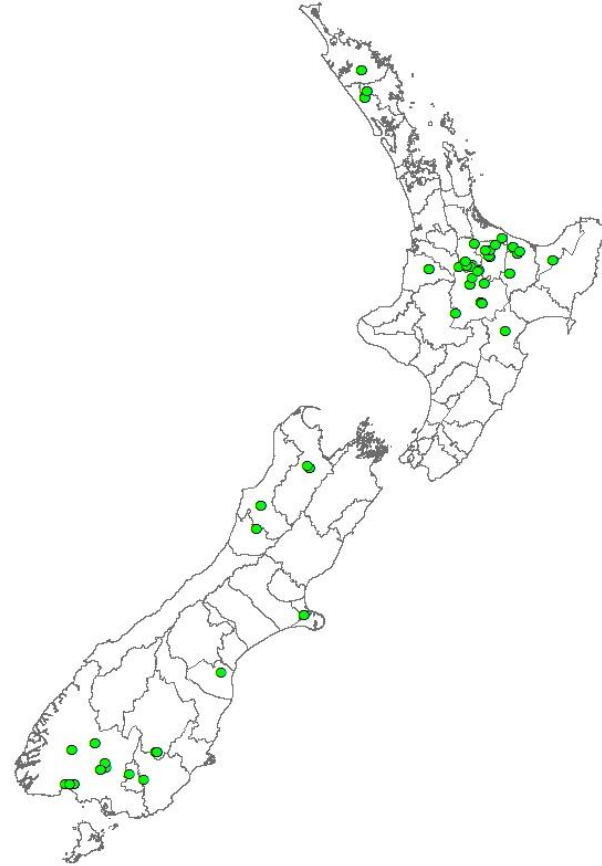
Eucaly



Eucalypt

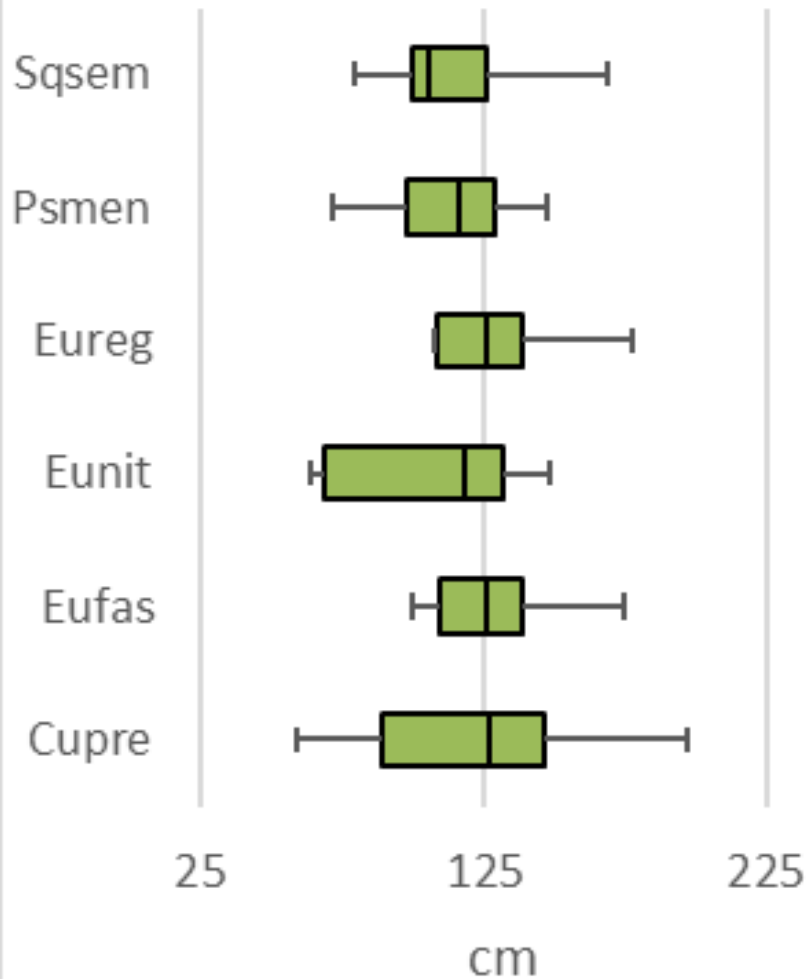


Eucalyptus nitens

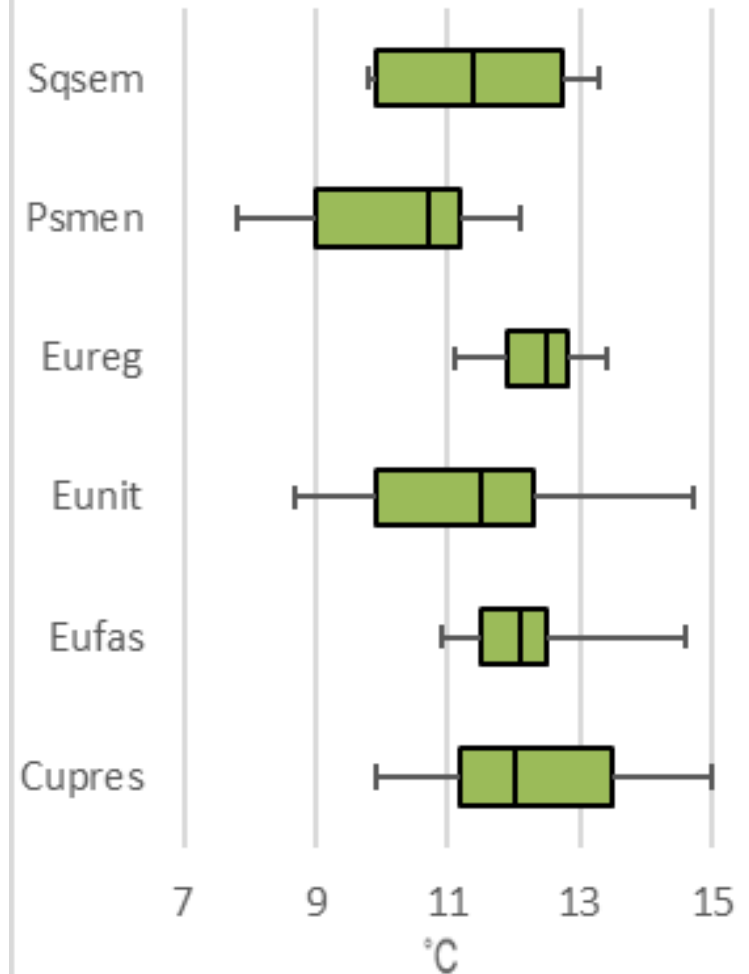


Rainfall and temperature distribution by species

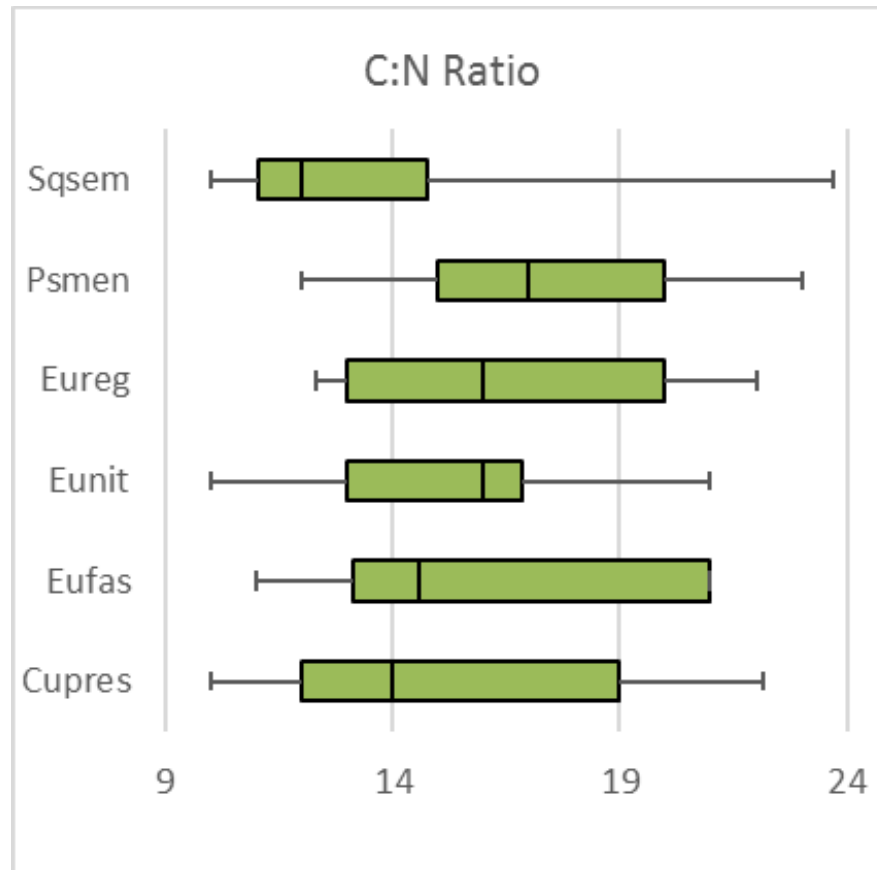
Mean Annual Rainfall



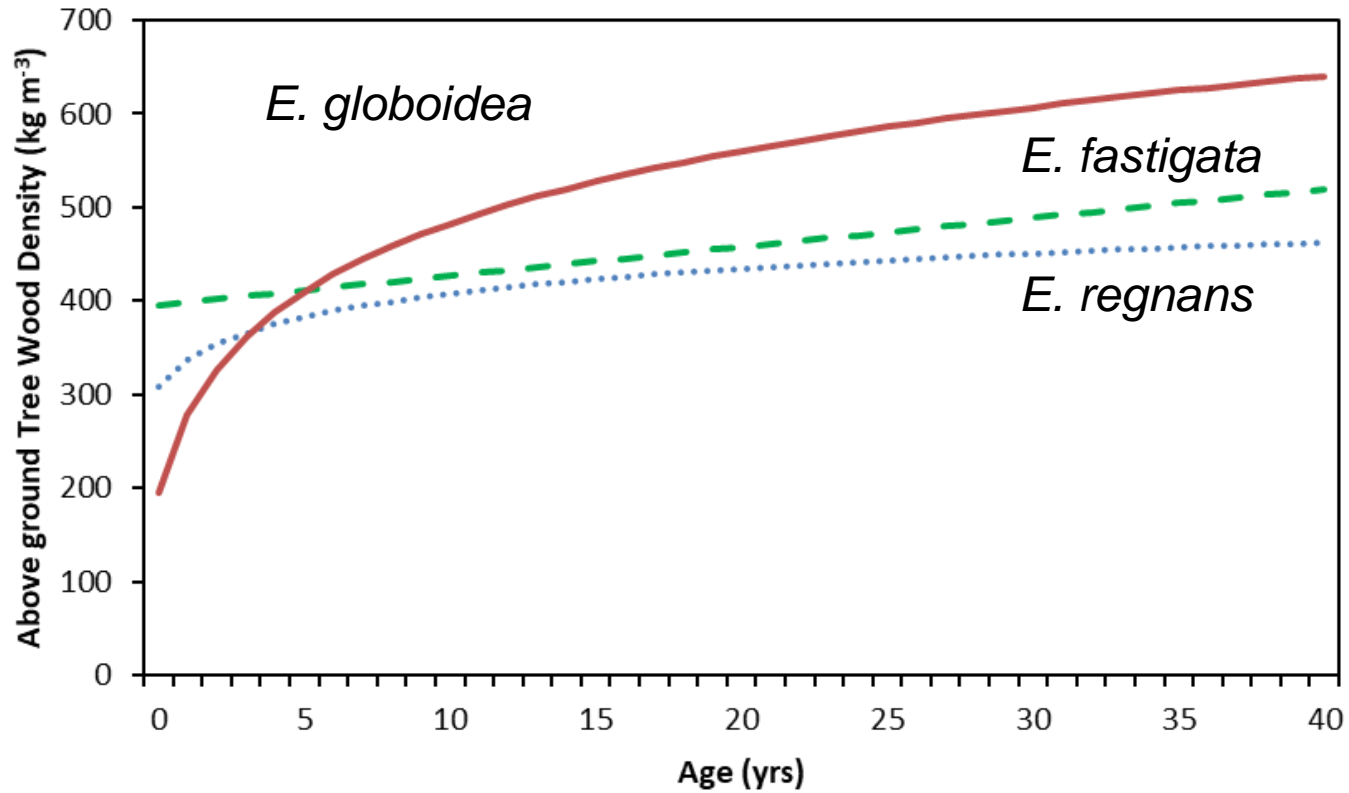
Mean Annual Temperature



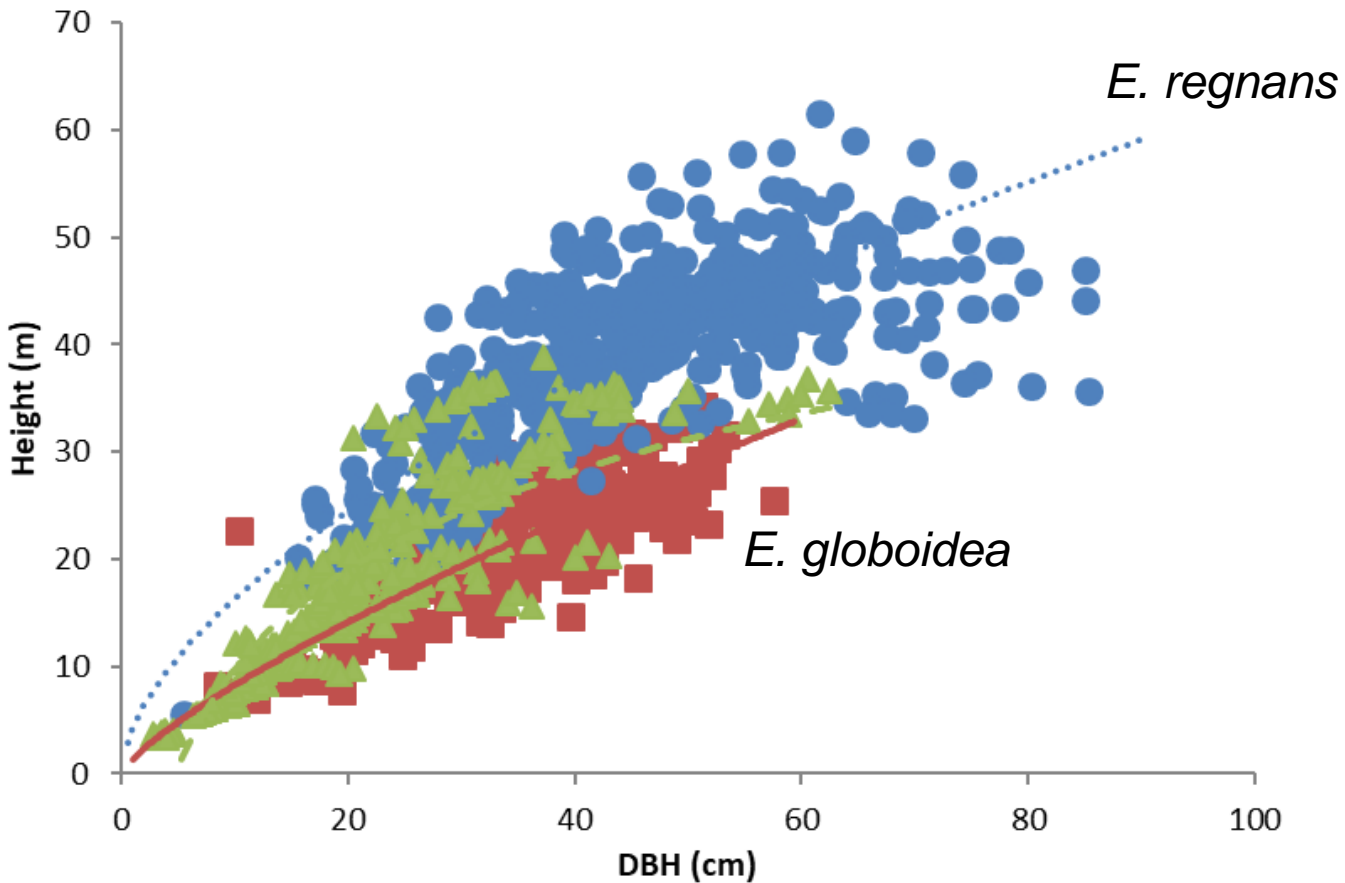
Soil C:N ratio by species



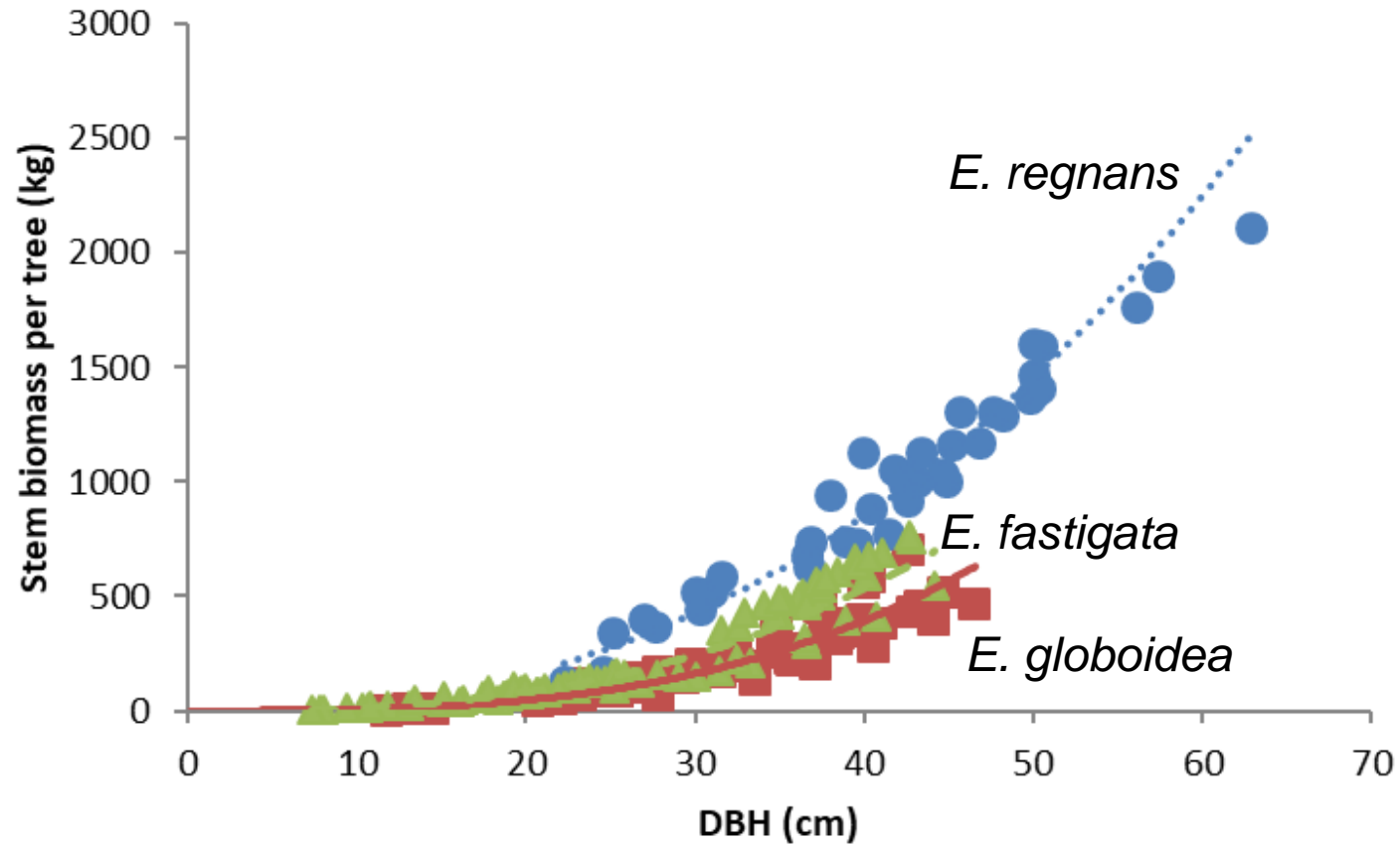
Wood density vs biomass



Wood density vs biomass

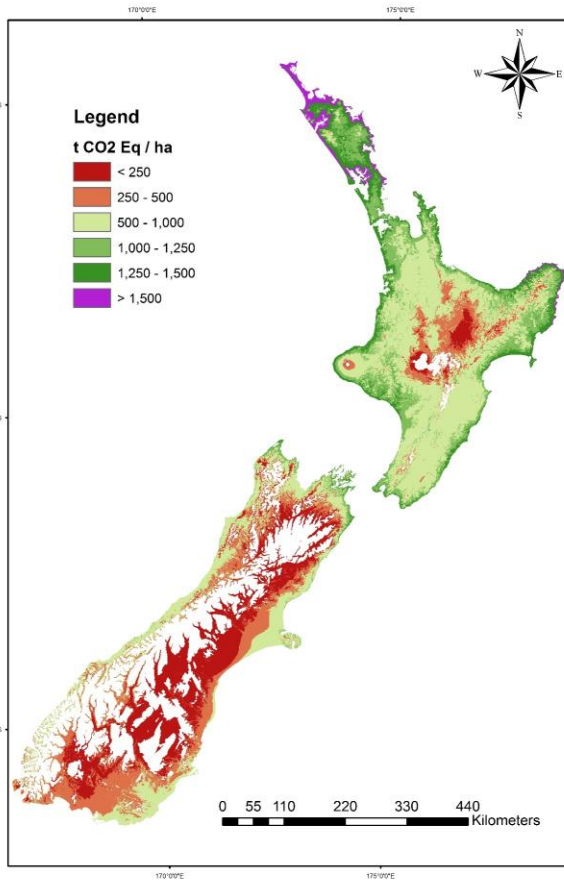


Wood density vs biomass

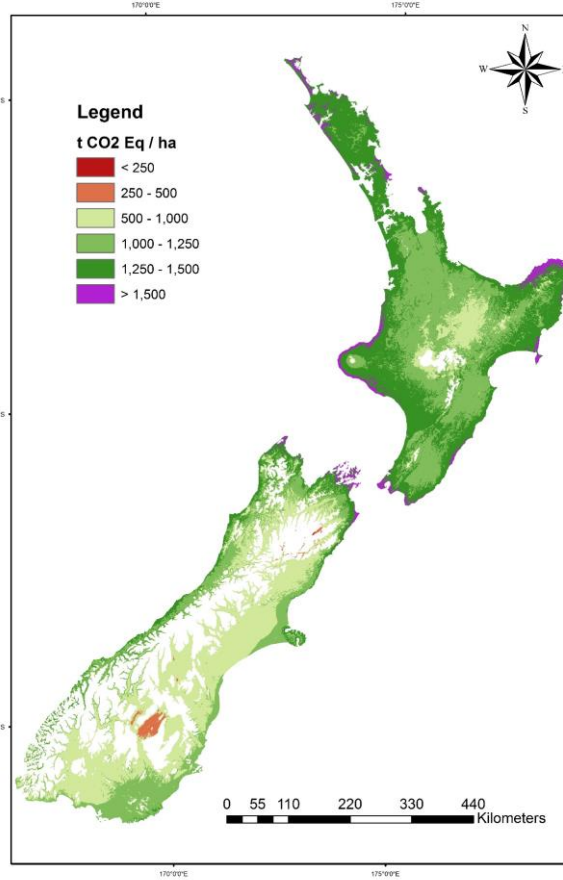


Carbon sequestered by species

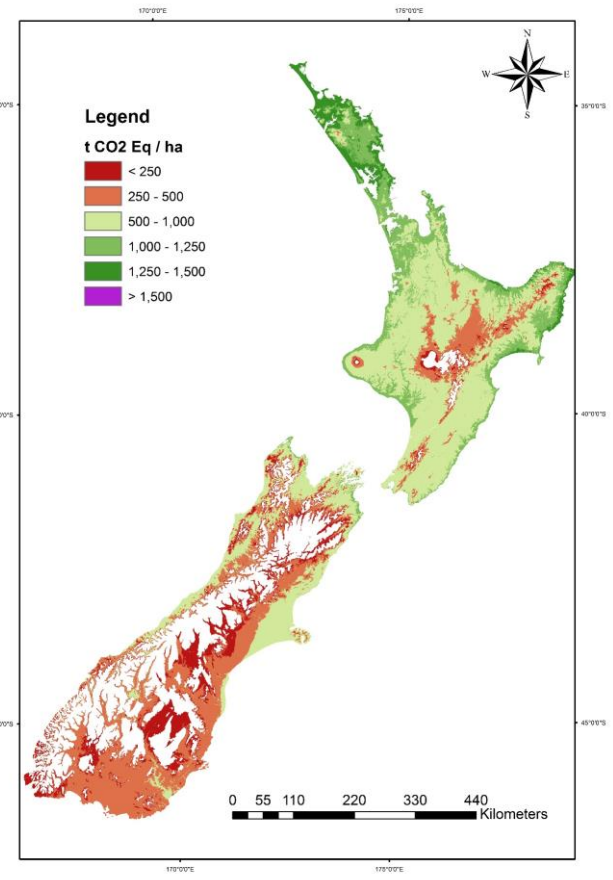
E. fastigata



E. regnans

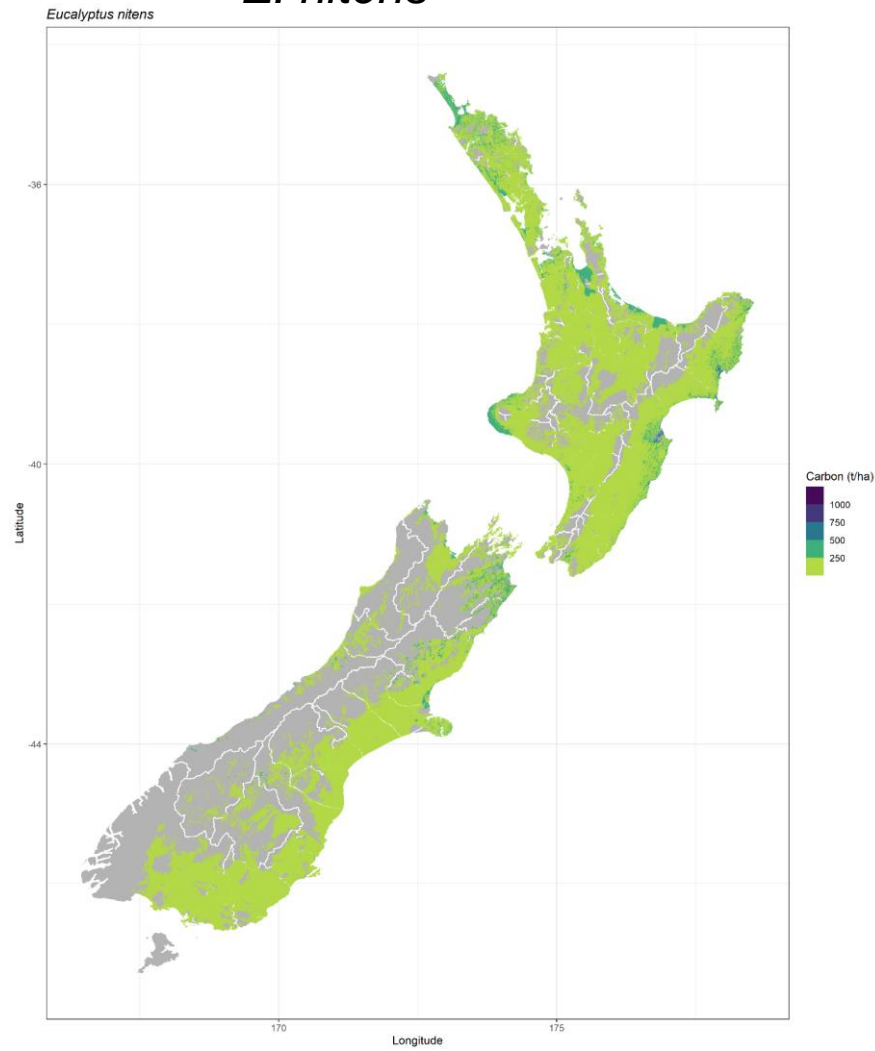


E. globoidea

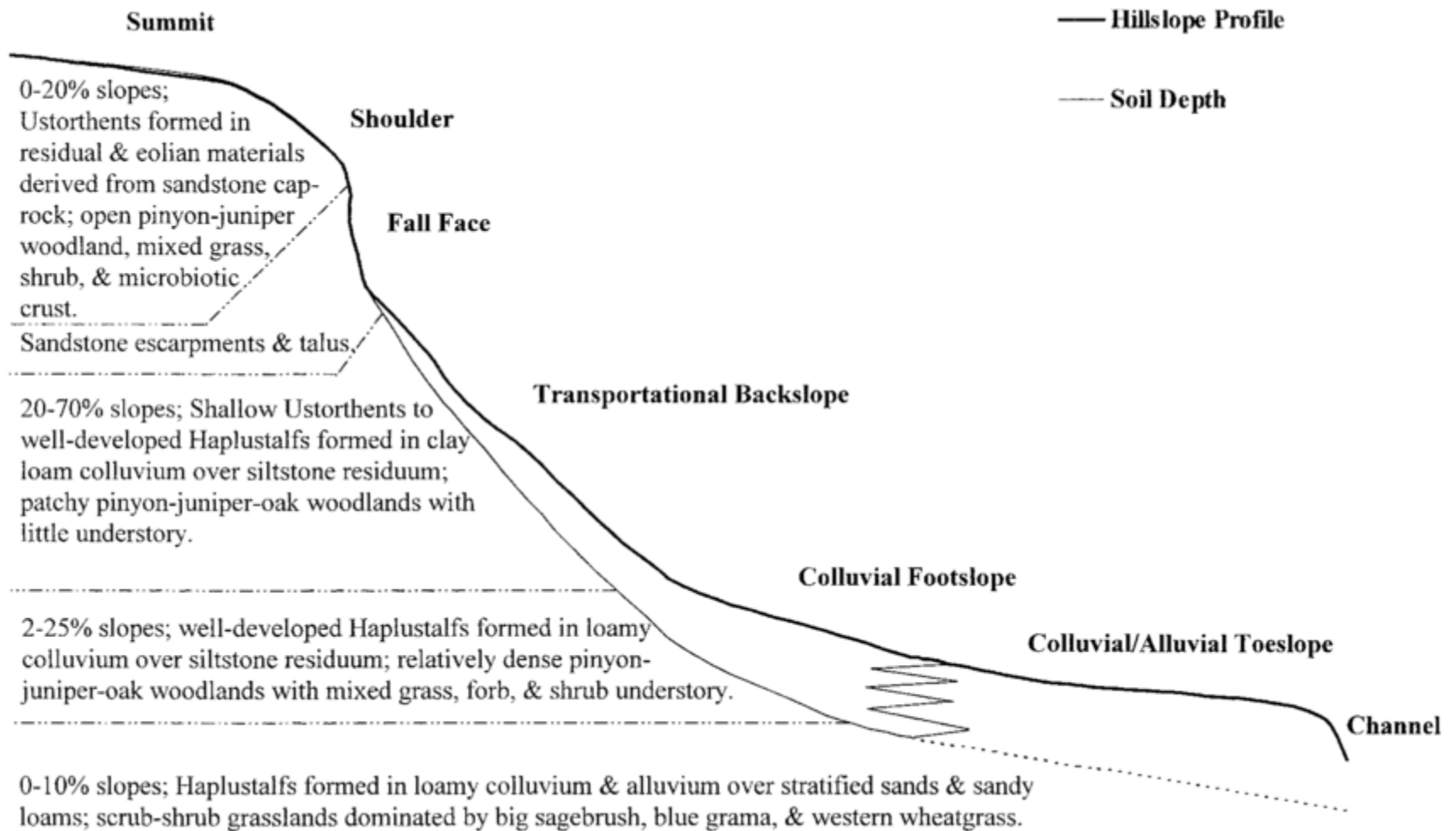


Carbon sequestered by species

E. nitens

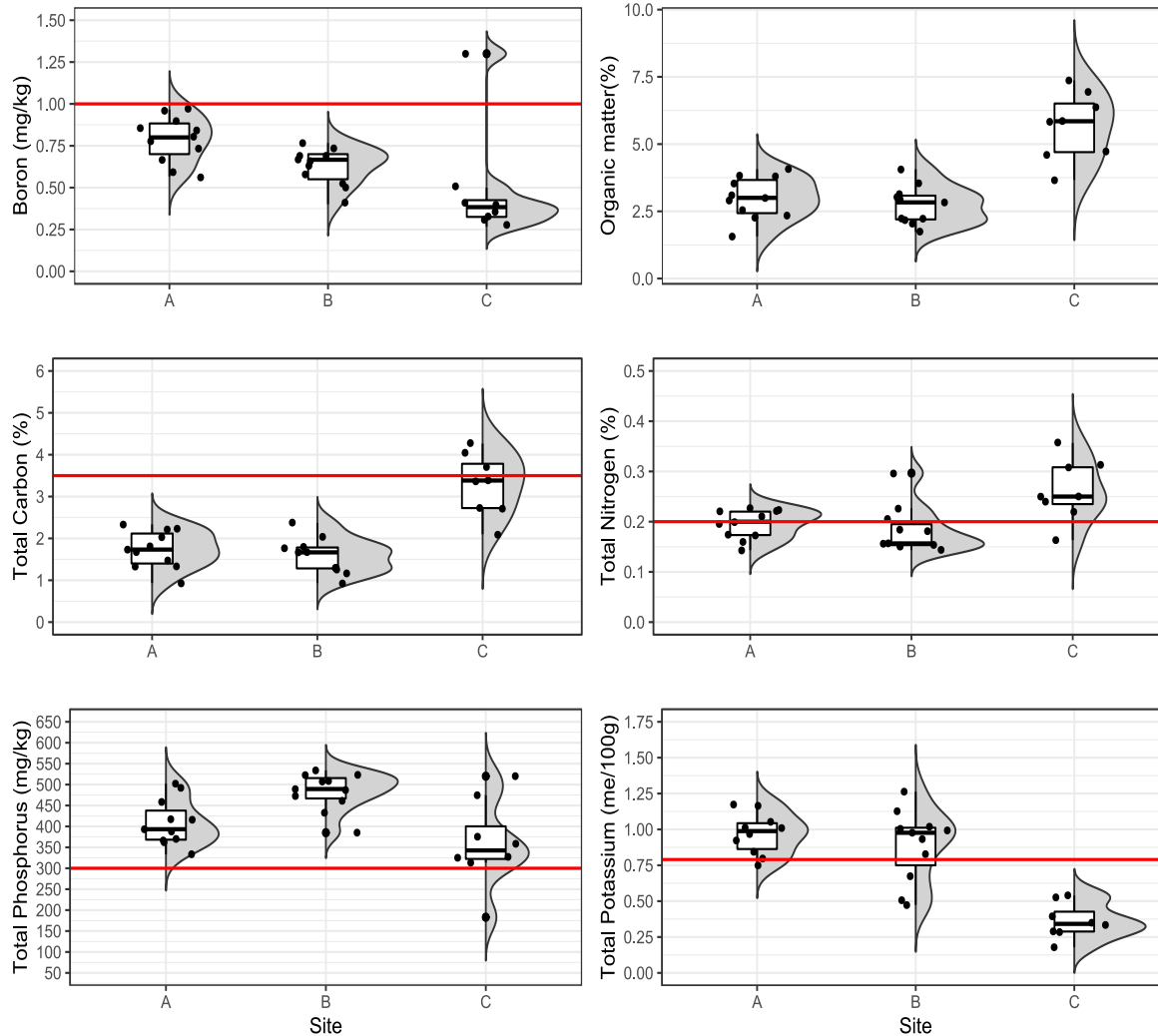


Hillslope position matters

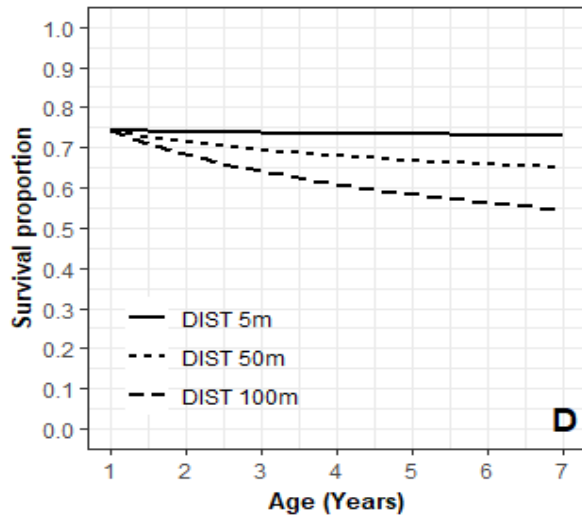
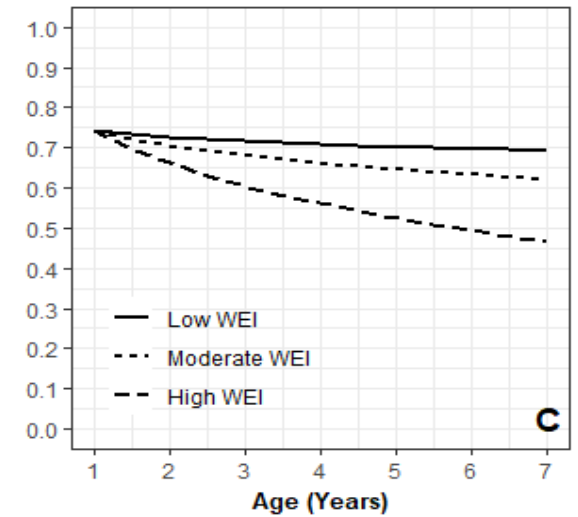
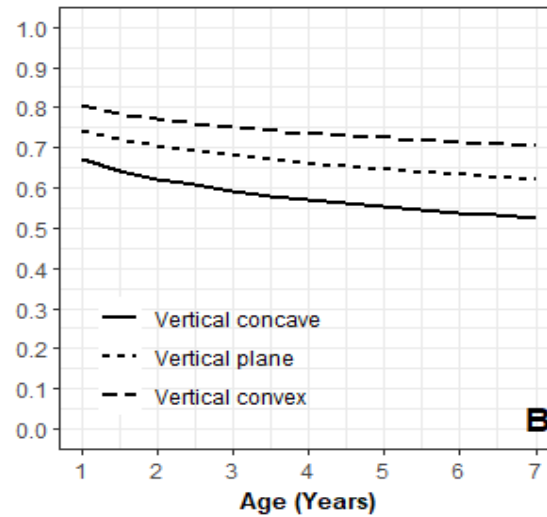
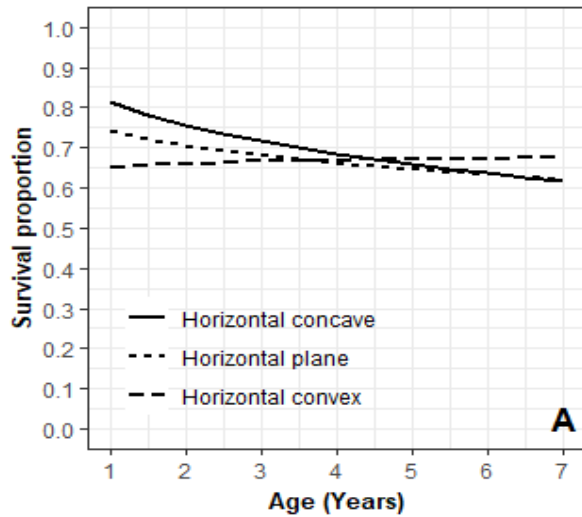




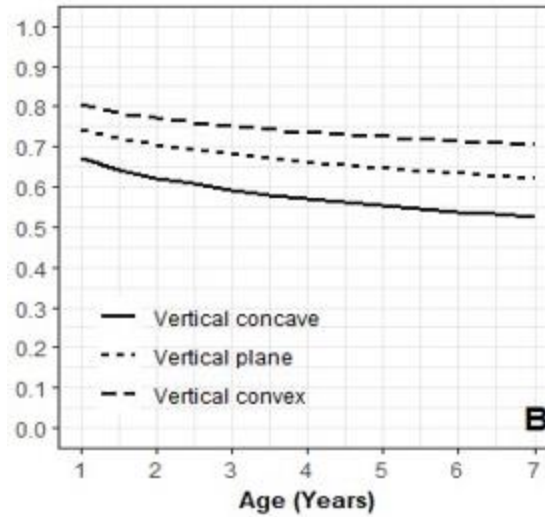
Soil nutrients varies between and within sites



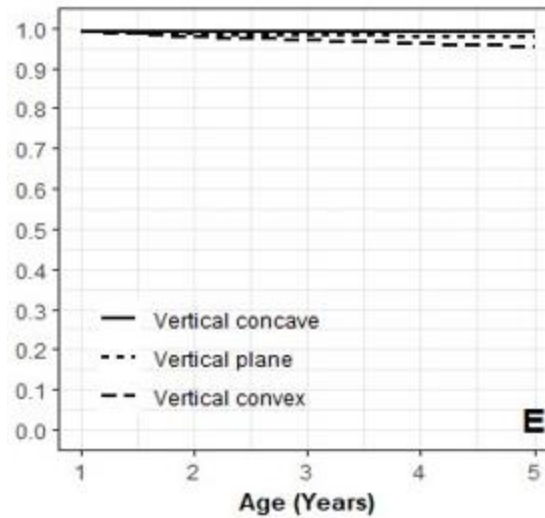
Survival – *E. globoidea* site sensitive



Survival

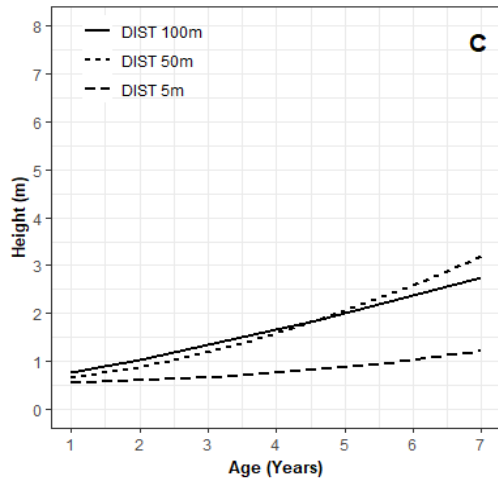
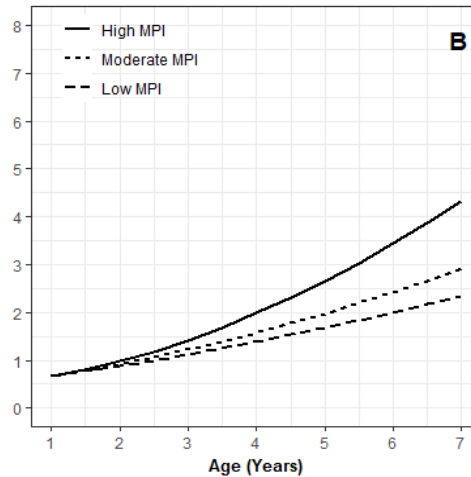
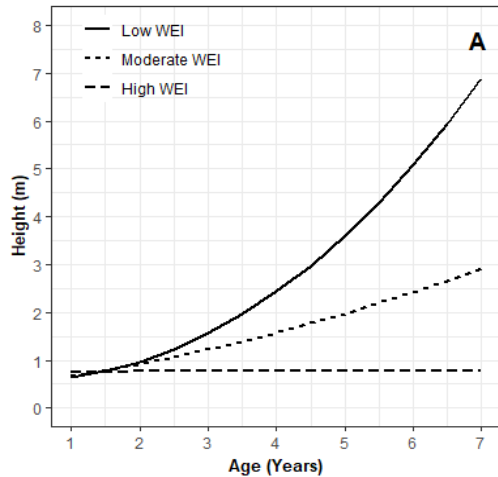


E. globiodes



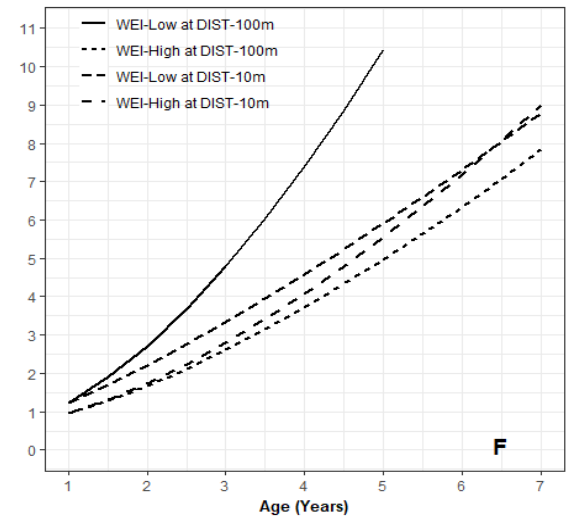
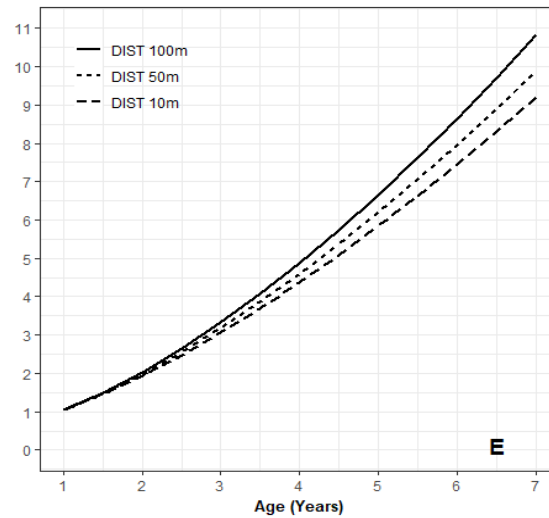
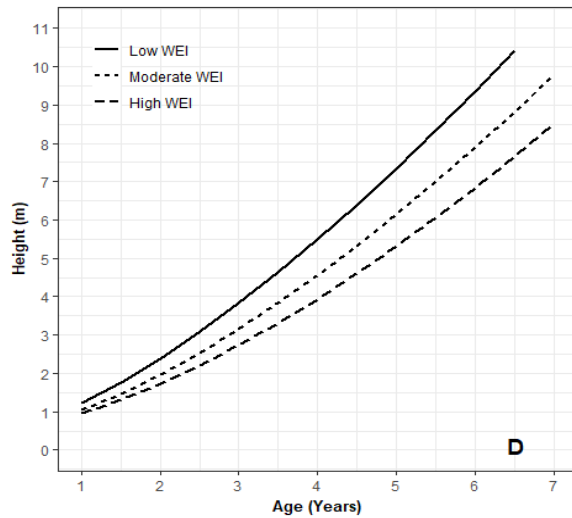
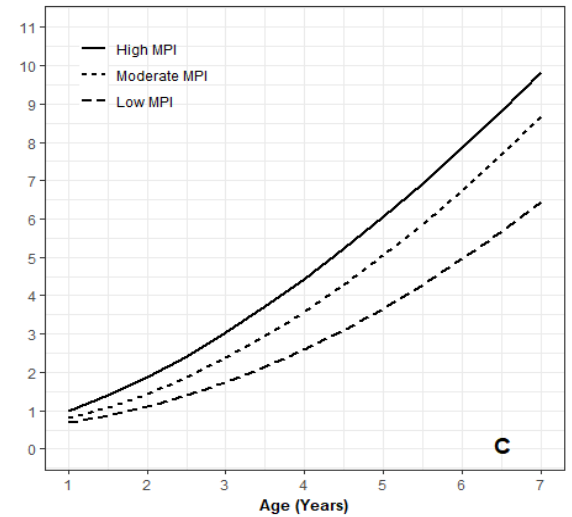
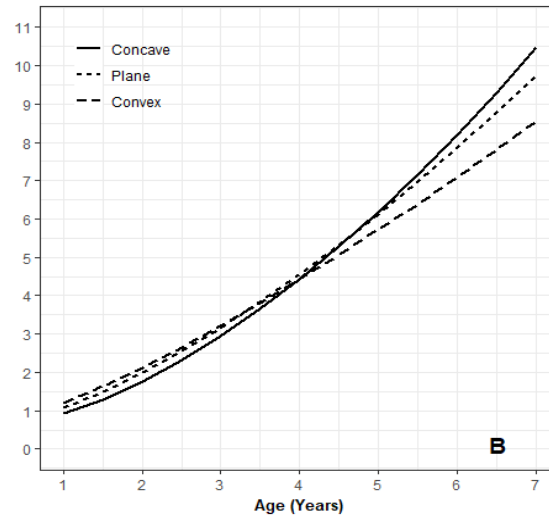
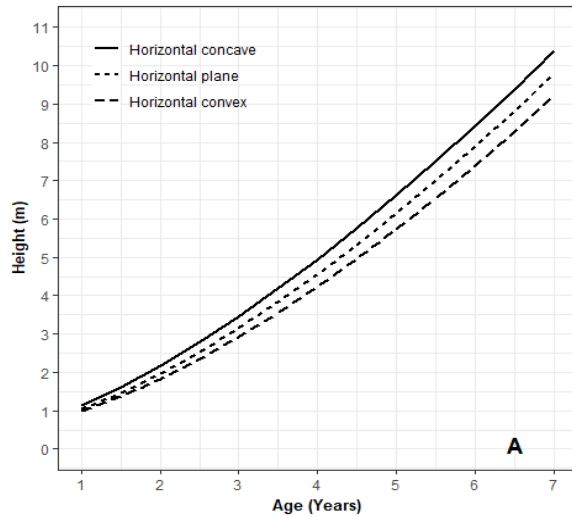
E. bosistoana

Growth - *E. globoidea*



- Wind sensitive
- Likes sheltered locations

Growth - *E. bosistoana*



Summary

- Information on growing and managing *Eucalyptus* species is limited, but improving
- Wairarapa Region suitable, in general, for *Eucalyptus* and durable *Eucalyptus* species
- Site selection is important for productive growth and high survival
- Species such as *E. fastigata* and *E. bosistoana* are not as site sensitive as other species
- *E. globoidea* and other more site sensitive species will grow well when properly position
- Pre- and post-establishment management is essential – no matter what species
- MPI species specific carbon sequestration tables coming soon

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Prosperity from trees *Mai i te ngahere oranga*

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