Rainforest Rescue

Creating and Utilising a Database for Tree Production

rainforest rescue

Former nursery in Diwan • Growing up to 12,000 trees a year

Our new nursery in Cow Bay • Growing up to 150,000 trees a year

Today’s presentation

- Sharing our production methods
- Managing our species database
- Navigating our challenges

Growing to order

- Project by project basis
- Site specific scenarios
- Our database is essential for each unique order

Species Database

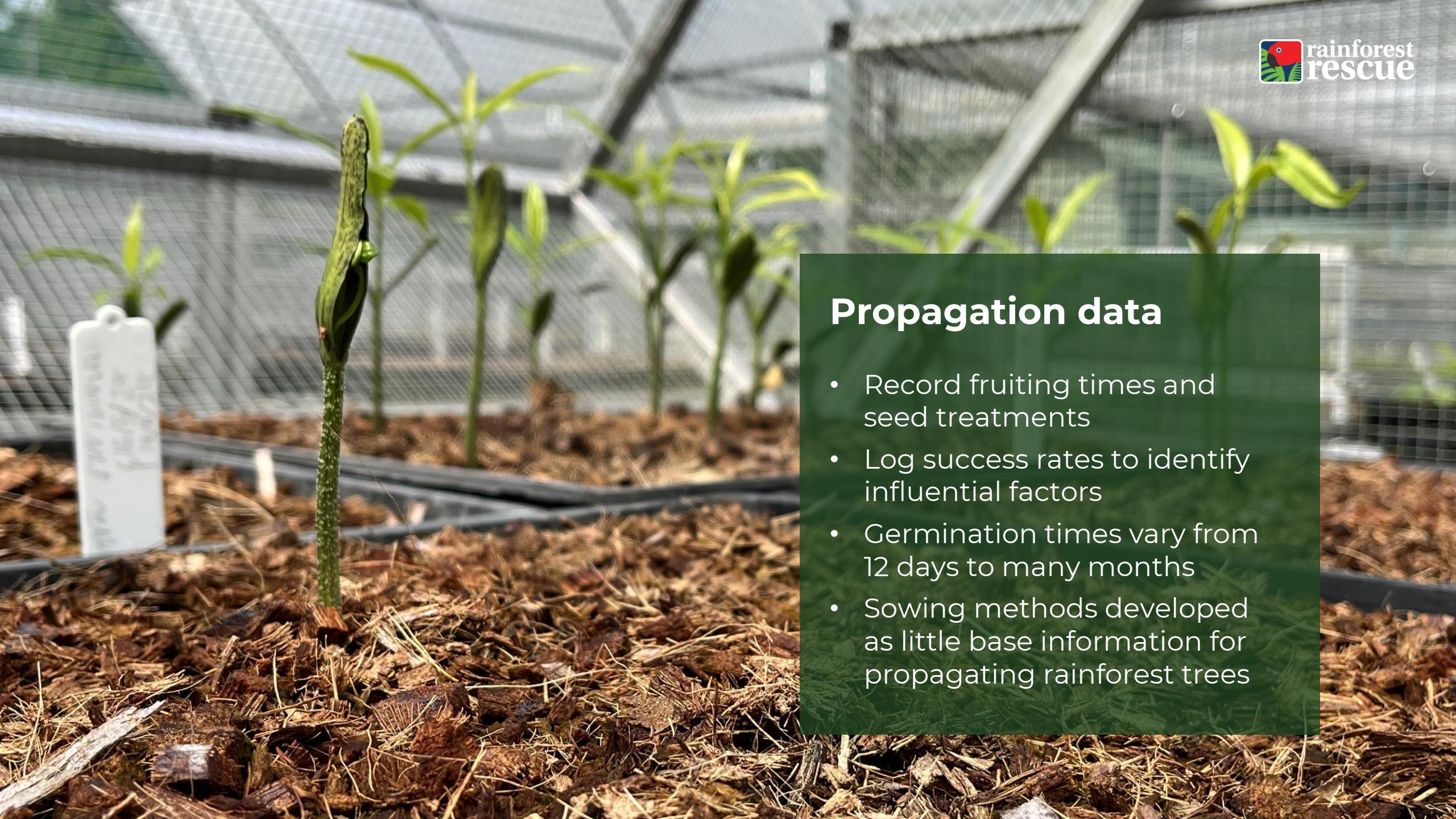
- Collecting relevant data for all species we have grown to date
- Successional stage
- Growth rate
- Height
- Distribution and habitat
- Descriptions of fruit and leaves for identification

Seed Collection

- Permits for council properties
- Private landowner authorisations
- Collect what's relevant from mature, healthy specimens with accessible fruits
- Locations recorded using GPS

Ethical collection policy

- Prioritise genetic diversity for a healthy forest
- Use multiple fruiting trees to minimise collecting from the same parent tree
- Collect a maximum of 20% of available fruit
- Florabank guidelines for best practice

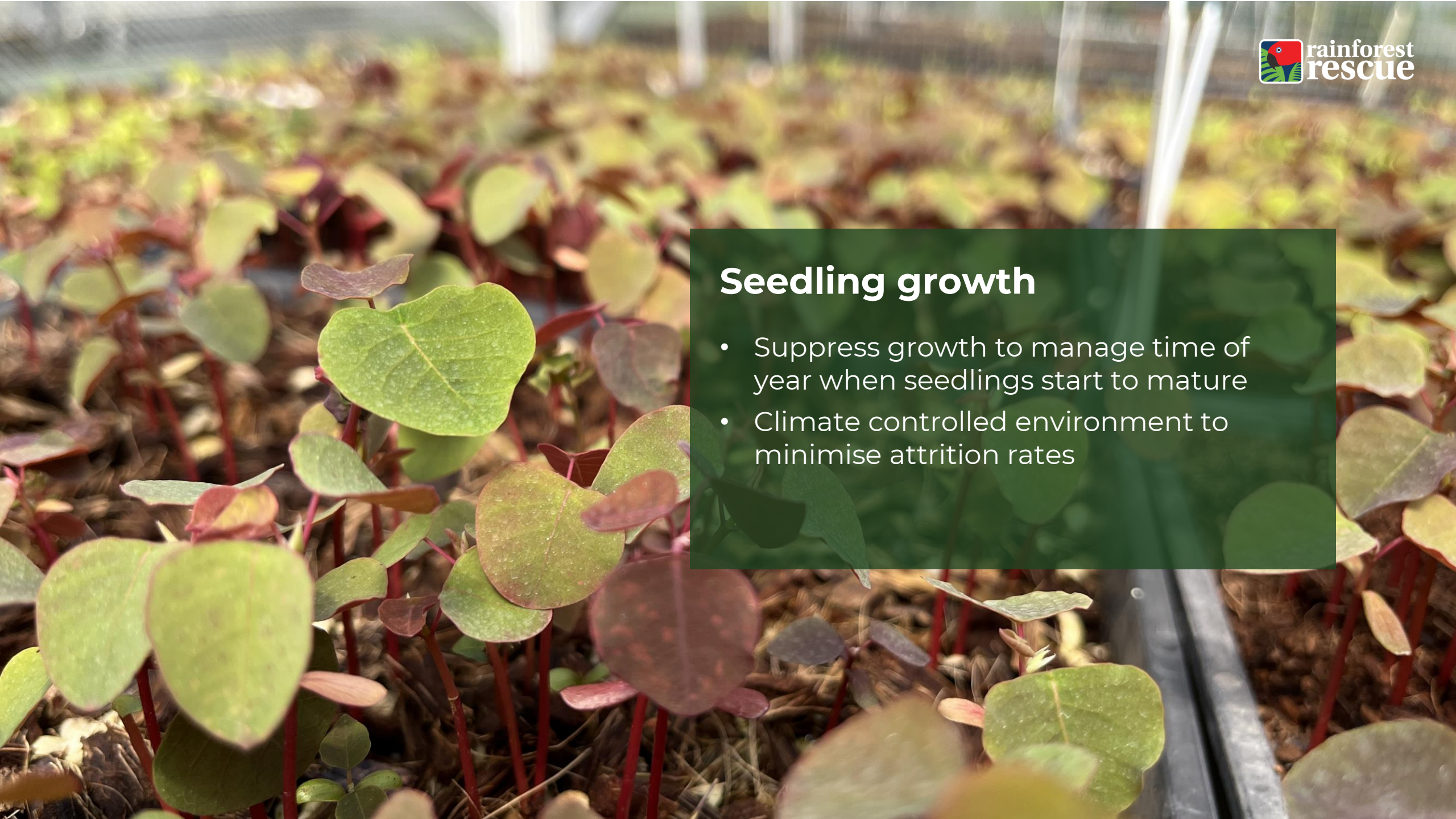


Propagation data

- Record fruiting times and seed treatments
- Log success rates to identify influential factors
- Germination times vary from 12 days to many months
- Sowing methods developed as little base information for propagating rainforest trees

Seed storage

- Experimenting with techniques despite recalcitrant rainforest tree seeds!
- Purpose-built germination cages to minimise rodent raids
- Storing in seedling trays



Seedling growth

- Suppress growth to manage time of year when seedlings start to mature
- Climate controlled environment to minimise attrition rates

Grow by restoration need

- Focus on core species that are always in supply for restoration projects
- Pre-order and plan for scheduled projects
- Use super native and forestry tubes to manage costs and labour
- Aim to reduce pests, disease and trees 'waiting' in nursery

Potting & Maturing

- No pot-on trees
- Fertilised potting medium
- Transfer to shadehouse
- Initial 50% shade
- Transfer to 30% shade to start hardening process

Hardening

- Harden in full sun
- Logging production journey for plants in database
- Gauging growth rates to determine dispatch dates

Pest & Disease Control

- Beneficial insects and mites
- Use native, local species to manage infestation
- Minimise myrtle rust outbreaks and risk of hosts in nursery environment
- Cultural control methods

Plant health

- Lowering pots per tray ratio to increase success rates
- Balancing growth speed and plant strength
- Labour efficiency gains

In Conclusion

- Systems are in constant adjustment
- Experimentation is key, be comfortable with failure
- Localised environmental conditions affect strategies
- Database is vital for efficient nursery production management