

Propagating Eucalyptus Selections

Presentation to NZDFI workshop

19 - 20 April 2017

Propagation By Grafting



- To establish seed orchards and produce greater genetic gain from interbreeding of superior individuals than from simple selection and cutting propagation.
- Very slow, waiting for trees to begin flowering and then to become large enough to produce useful quantities of seed.
- Incompatibility issues.

E. Quadrangulata Orchard



300 ramets of 28 clones
planted spring 2016.
After cyclone Debbie...

E. Globoidea Archive



Around 130 ramets of 30 clones planted spring 2016 for further multiplication.

E. Bosistoana Orchard



Around 170 ramets of 16 clones planted spring 2015, filling about half of available orchard positions.

Infill is on hold pending new assessment of DFI trials.

Propagation By Cuttings

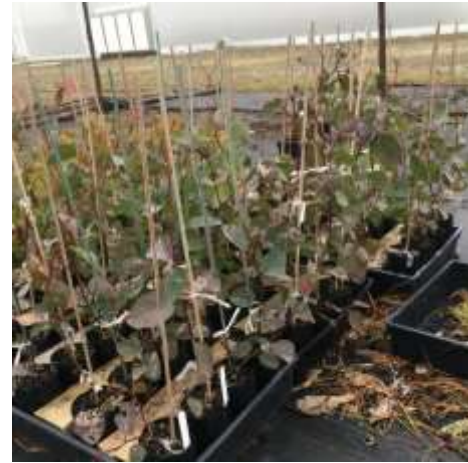


- For rapid multiplication and deployment of superior selections.
- Technically difficult, particularly with older material.

Narromine Nursery



First Proseed Settings



Summer 2015/2016 around 750 cuttings were rooted, taken from a range of *E. bosistoana* seedlings grown at Harewood.

Stool Bed Establishment



A hydroponic batch system was constructed for a stool establishment trial.

250 cuttings from 18 clones were planted mid-June.

Stool Bed Establishment

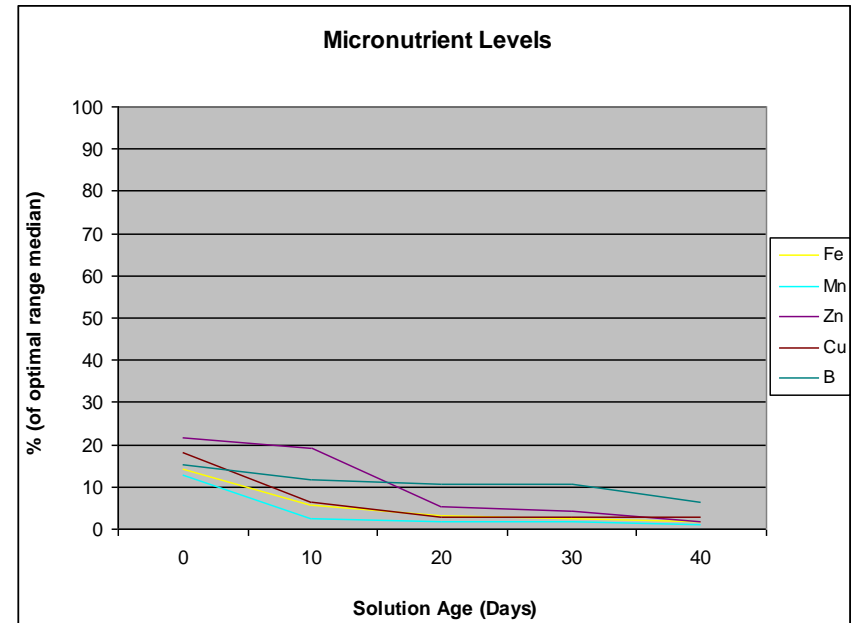
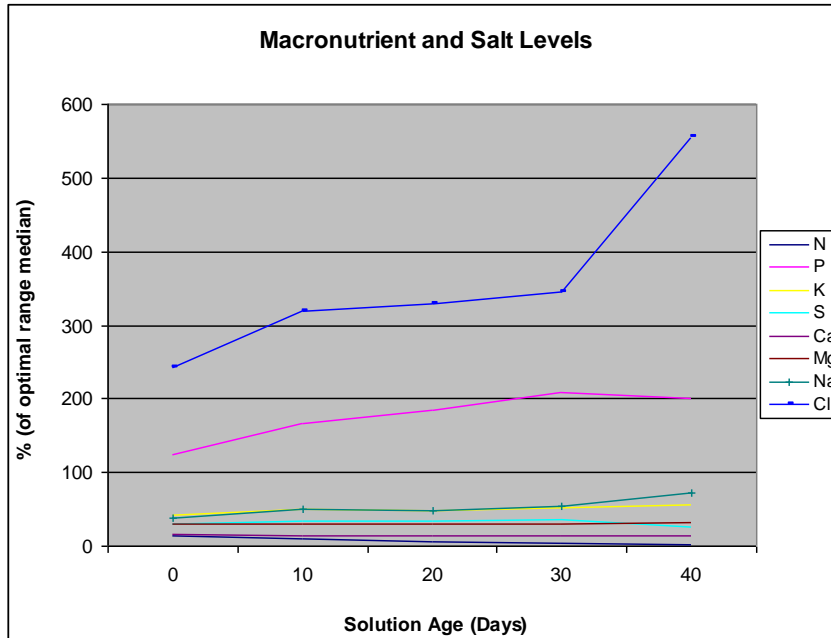


End October
19 weeks
Smoking!

Deficiency and Environment Issues



Nutrient Flow Solution (NFS) Levels Over Time



Root Development



K & L Nurseries: Rose Growers



Batch System Mk II



Woodville Programme – Stage One

5 - 6 rooted cuttings each from
1000 – 2000 *E. bosistoana*
growth strain selections
(from first of two trials)

~18 rooted cuttings each of a
selection subset for clonal trials.

Propagation Facility



Logistics

- Selected ortets labelled on site.
- Two collections: late February and late March.
- Labelled cutting material put into plastic bags, sprayed with fungicide, packed into polystyrene fish boxes and chilled.
- Boxes transported overnight by refrigerated truck.
- Material set within 4-5 days



Settings



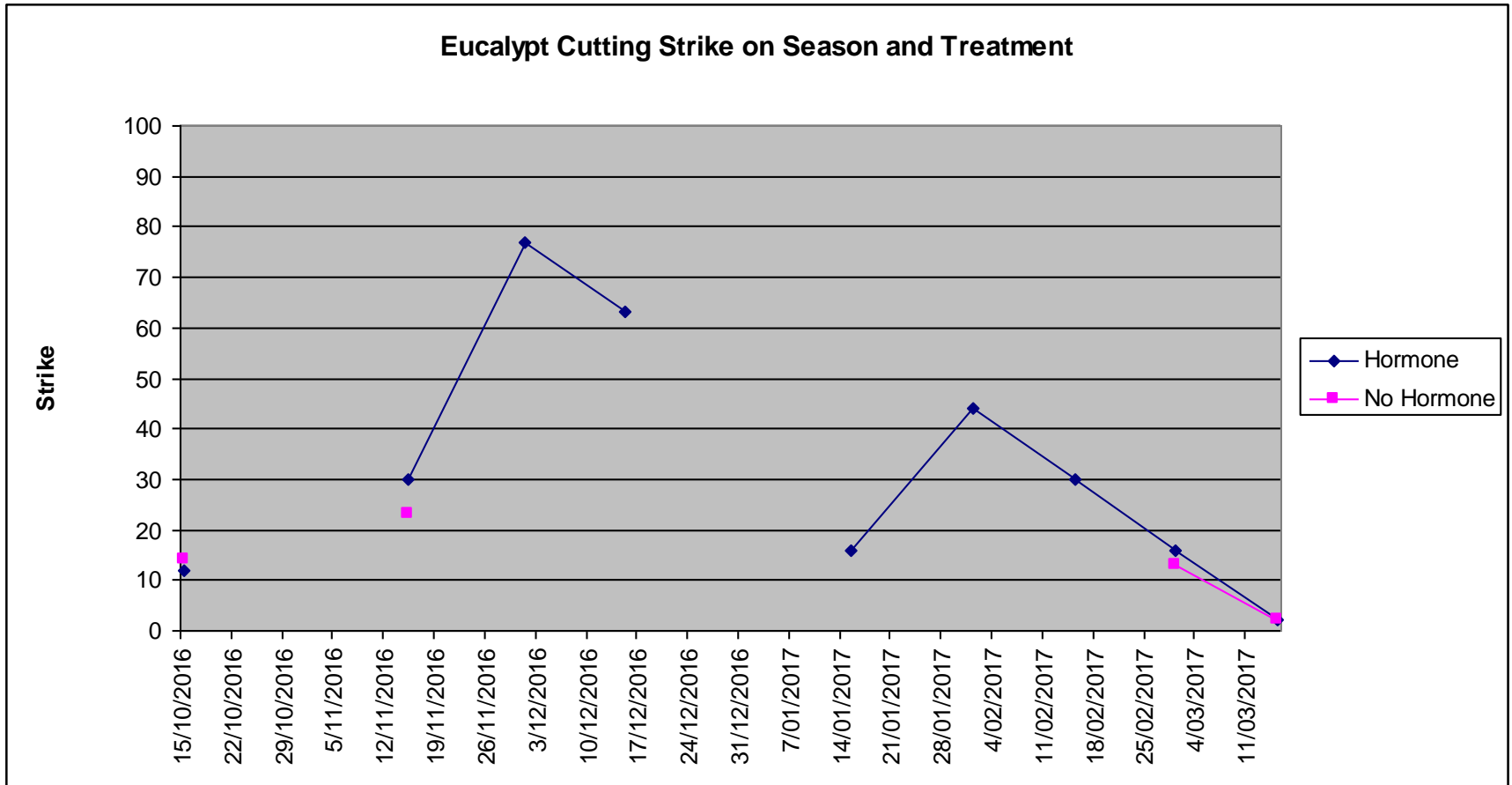
- 693 clones collected
- 11342 cuttings set
- Average 16 cuttings/clone
- Clonal settings split between two bench locations.

Woodville Programme – Stage Two

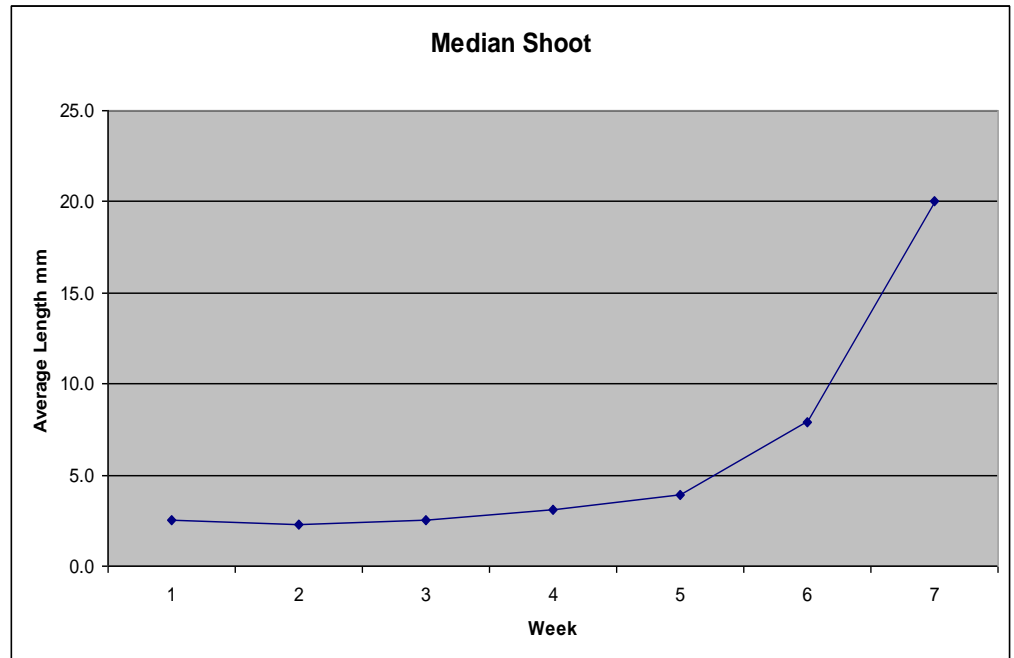
Make good shortfall on stage one setting targets.

Set material from additional selections in second E.bosistoana trial

Programme Timing



Stool Development (Cut back early September)



Setting System

