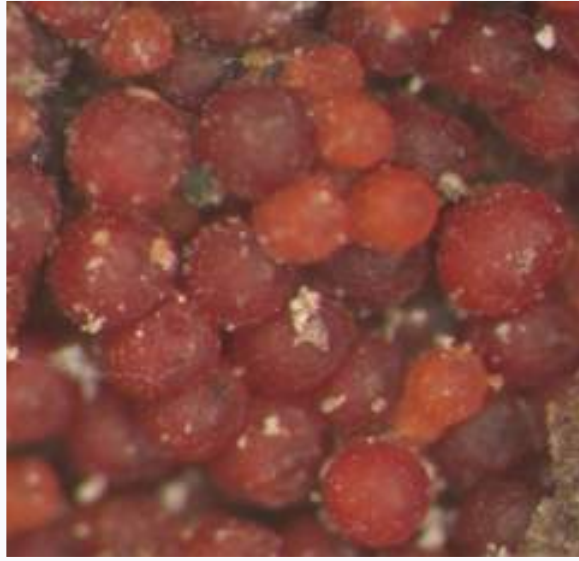


ensis

Tod Ramsfield
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Ensis Forest Biosecurity and Protection

The effect of pruning on
the presence of *Necrtria
fuckeliana*

Hypothesis

Pruning wounds provide infection courts for *Nectria fuckeliana*, leading to initiation of the flute canker disease.

Test: Use pathogen DNA to compare the presence of *Nectria* in pruned and unpruned trees.

Trial design

- Pruned and unpruned trees were sampled.
- Four different stands.
- Three forests.
- 180 trees total, 90 pruned, 90 unpruned

Stand Histories

- Stand one: Planted 2002, first pruned October 2005.
- Stand two: Planted 2000, first pruned September 2005.
- Stand three: Planted 1998, first pruned August 2004.
- Stand four: Planted 1997, first pruned January 2004, second pruning March 2005.

Stand one



Planted 2002, first pruned October 2005

Taking cores



DNA Results 2006

Pruning Status	Nectria present	Nectria absent
Pruned	19	68
Un-Pruned	22	64

Chi-square results: 0.327 – no significant difference

2007 Update

- All trees have been resampled (19 – 26 Feb).
- Samples removed from all increment cores and surface sterilised and plated.
- DNA is currently being extracted from all samples.

- All trees were visually inspected.
- Perithecia observed on one dead tree.
- Pictures that follow are all of trees that tested DNA positive in 2006.

- Tree 116
- Pruned
- Fluted
- Culture positive



- Tree 131
- Not pruned
- Fluted
- Culture positive



- Tree 145
- Pruned
- No flute
- Culture positive



- Tree 122
- Not pruned
- No flute
- Culture positive



To do

- DNA test will be conducted on all samples collected.
- DNA extraction 12 samples / day = 15 days to extract DNA.
- Trees have been retagged for future observation if required.

Conclusions

- To date the experiment has probably raised more questions than it has answered, but that's science!
- Hope to have more results in time for the *Nectria* focus group meeting in Dunedin on the 20th.

Acknowledgements

- FBRC for funding
- Peter Oliver, City Forests
- Paul Greaves, Wenita Forest Products
- Anna Hopkins
- Matt Power