



Tissue culture for 21st century forests

Jana Krajnakova, Heidi Dungey, Russell Burton
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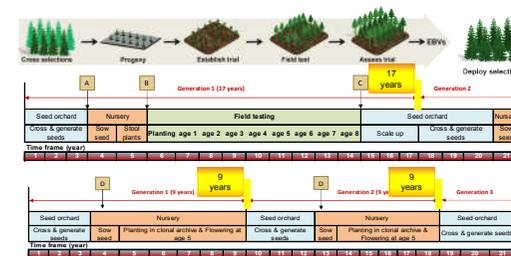
Outline

- A new programme focusing on making a step change in deployment of elite radiata pine germplasm
- Priority identified in the Forest Growers Levy Trust Science and Innovation Strategy
- We aim to do this by using bioreactors, fluidics systems and automation
- We have assembled a very substantial and very talented team to do this with oversight by industry
- The potential value that could be realized is over \$1.3 billion per annum
- Our job is to get this to proof of concept by 2026 and implemented soon after

The problem we seek to solve

- Forest industry has made a substantial investment in radiata pine breeding over 50 years
- Gains in productivity, wood quality and disease resistance are impressive
- Realizing these gains in deployment are slow – up to 24 years
- Deployment being fast, agile and cost effective – never more important in the face of increasing commercial and environmental pressures

Timeline of deployment



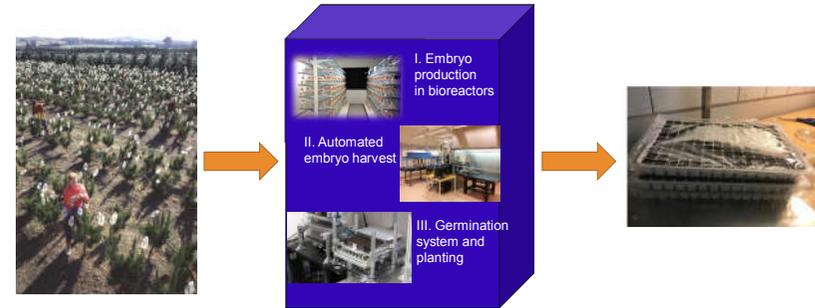
How we intend to tackle this challenge?

- Moving from traditional Petri-dish based propagation to high-throughput bioreactors paired with automated embryo sorting and germination



SE factory

Effective and efficient production of rooted plantlets



Team delivering this

- We are leveraging international capability and their investments in this area
- We are leveraging a lot of background knowledge developed in New Zealand
- We are leveraging New Zealand industry experience





Success looks like

- Varietal deployment in conjunction with genomics reduced by 15 years
- A platform with application to other tree species
- Built capability in an area critical for New Zealand to deliver on our forestry ambitions
- Future proofing forestry – deliver on the right tree agenda, respond to environmental and commercial pressures

Thank you for your time

- We will be meeting with industry and stakeholder groups as we progress
- We shall be reporting back to you annually



Jana Krajnakova
Jana.krajnakova@scionresearch.com

www.scionresearch.com
www.fgr.nz

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