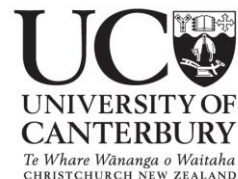


# NZDFI Breeding Programme

Durable Eucalypts on Drylands: Workshop /Research  
Update.

June 2018.

Luis Apiolaza & Ruth McConnochie

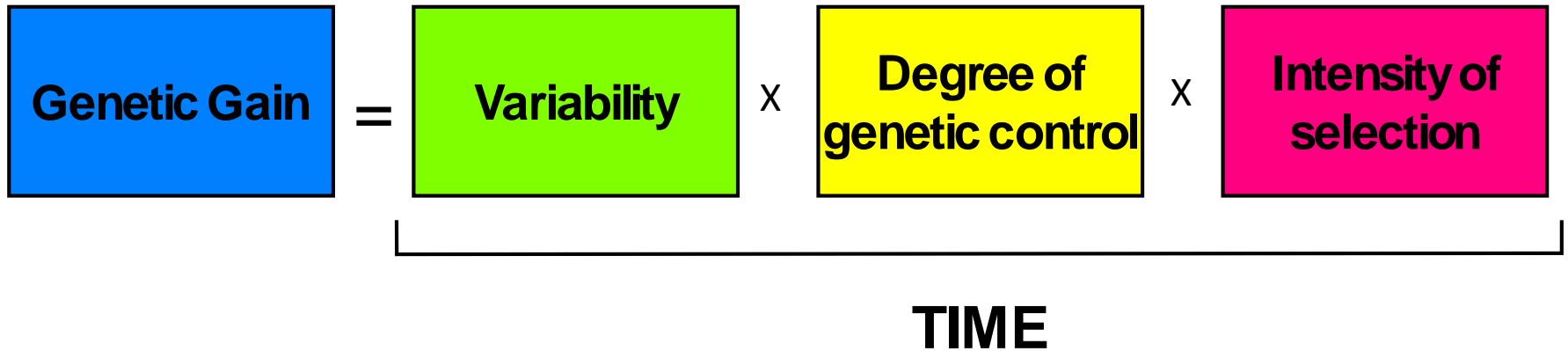


# Unique features of the NZDFI Breeding Programme

1. Broad Genetic Base
2. Multiple focus from the beginning
  - Quantity – growth, form
  - Quality – wood properties
  - Adaptation – pest, cold tolerance
3. Match genetic material to environments: niche products for niche sites
4. Multiple species
5. Screen at a very early age

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5. Screen at a very early age
6. High selection intensity



- Phenotypic variation in the population
- Heritability of the traits from parent to offspring
- Proportion of the population selected as parents for the next generation
- Length of time necessary to complete a cycle of selection

# NZDFI Breeding Populations

	<i>E.bosistoana</i>	<i>E.globoidea</i>	<i>E.quadrangulata</i>	<i>E.argophloia</i>	<i>E.tricarpa</i>
Total No. Seedlings Planted	32100	26640	15576	3230	1800
Total No. Families Tested	192	161	104	18	24



*E. globoidea* plus tree selection and grafting from age 5 year progeny trial. (Growth & Form)

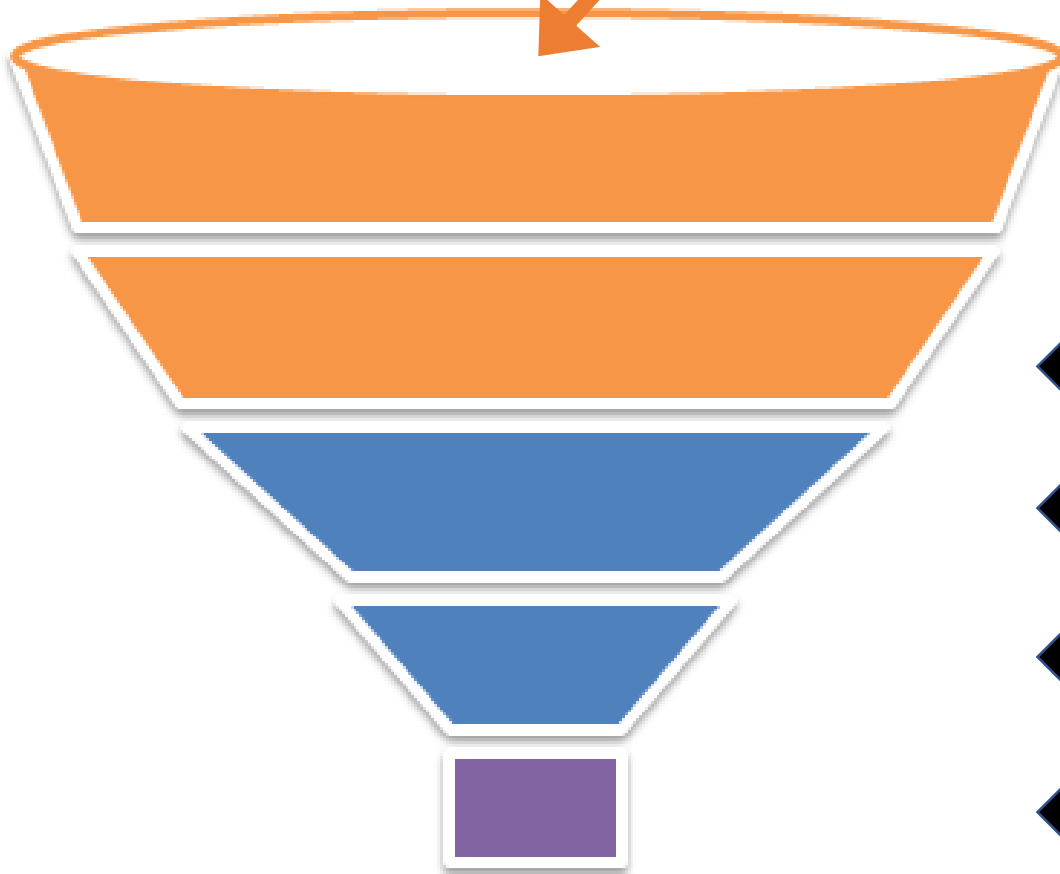


<b>2017 Family BV across 2 sites</b>				
		<b>DBH</b>	<b>Straightness</b>	<b>Form</b>
<b>All Families</b>	<b>Max</b>	20.23	0.59	1.12
	<b>Min</b>	-13.28	-1.13	-0.88
<b>All Families</b>	<b>Mean</b>	0.10	0.00	0.00
<b>Selections</b>		9.36	0.25	0.26

**Between site correlation**

DBH                      0.72  
 Straightness/form      0.94

*E. globoidea* Breeding  
Population -143 families,



Delivery of  
improved genetics

Seed Stand

Seedling seed orchard

Grafted seed orchard  
– 32 families

Clones - Cuttings



# NZDFI Breeding Plan

