

The challenges and lessons from breeding eucalyptus. In Eucalyptus Plantations.

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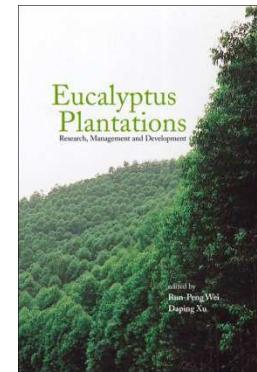
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Abstract

Eucalyptus breeding efforts started relatively late, compared with conifers species and poplar. By 1980, only a few breeding programmes were in place, little was known about the genetics of the species, their reproductive biology and the best deployment schemes, including cloning and seed orchards. It is remarkable and inspiring that by now, some of the most advanced and focused breeding programmes in the world are from *Eucalyptus*. Today, several programs are now well into their 3rd generation of breeding, leading the way in the use of clonal forestry and becoming one of the preferred species in the applications of genomics to forestry.

The paper will briefly review the progress in strategy, technology and outcome over time in eucalypt breeding, in par with the changes in forestry as a whole, and discuss what may be the lessons to take from this co-evolution. The general principles and restrictions underlying *Eucalyptus* breeding programs are presented and put in perspective. Finally, some of the opportunities for developing new and better programs are briefly discussed.