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Genetic control of growth and wood traits in Eucalyptus camaldulensis × *E. urophylla* and reciprocal hybrids

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Eucalyptus camaldulensis (Ec) × *E. urophylla* (Eu) and reciprocal hybrid crosses were evaluated for growth and wood traits at four years at West Godavari Dt, Andhra Pradesh State located in Southern India, in relation to full and half sib progenies of pure *E. camaldulensis* maternal parents. Interspecific hybrid progenies had 16.6% higher average growth and 8% lower average wood basic density than pure species progeny. The interspecific hybrid progenies fibre properties viz., fibre length, fibre width, lumen diameter and fibre wall thickness were comparably higher than pure species progeny and check clones. The Ec × Eu crosses had comparable growth and wood basic density as the reciprocal hybrid progeny, but fibre length was 3.4% higher than the Eu × Ec hybrids, the values being statistically significant at p<.001 level. Analysis of variance of data was done using the 20th Edition of Genstat software (VSNi). Growth and fibre traits showed a positive relation but wood basic density showed a negative correlation (r = -0.94). There was a positive correspondence between the General Combining Ability (GCA) of pure *E. camaldulensis* maternal parents and their General Hybridizing Ability (GHA) for growth. The study showed that parents of Ec and Eu could be used to improve the growth and fibre traits in interspecific hybrids.

Keywords: Eucalyptus hybrids, reciprocal crosses, growth, wood property, fibre length, General Combining Ability (GCA)

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