

PROJECT PROFILE

- Project Title:** Quantitative trait loci (QTL) mapping in eucalypts for salinity tolerance
- Principle Investigators:** Dr. R. Yasodha, Scientist E
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- Start and Completion dates:** April 2008 – March 2013
- Objectives:**
1. Development of mapping populations for the inter-specific eucalypt hybrids
 2. Genotyping of mapping populations using SSR markers
 3. Development of QTL maps for the salinity tolerance traits.
- Funding Agency:** Indian Council of Forestry Research and Education (ICFRE)

Summary:

- Salt tolerant *E.camaldulensis* clones and hybrid individuals identified through hydroponic experiments.
- Individuals with hybrid vigour were identified from field trials, require replicated trails for hybrid clone release.
- Immortal mapping population was established in the field as vegetative multiplication garden.
- Controlled hybridization produced 70% fruit set and 9.4 seeds per capsule.
- Hybrid purity values for 25 SSR loci were > 85.0% which is acceptable in controlled hybridization through conventional methods.
- Genetic linkage map developed for the cross *E.camaldulensis* × *E.tereticornis* was developed and the total length of paternal and maternal map was 1422.28 cM and 1845.8 cM respectively.
- One significant QTL was detected in the chromosome 6 explaining 64% variation.
- Field trials were conducted to evaluate the performance of hybrids.