

Project Profile

Project Code:	NFRP 151
Project Title:	Evaluation of interspecific hybrid clones of Eucalyptus for productivity and wood traits
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Funding Agency	ICFRE
Date of commencement of the project:	01-04-2014
Date of completion of the project:	31-03-2018
Total Budget of the project:	Rs.8.5 Lakhs

Objectives:

1. Evaluation of hybrid clones from the inter specific hybrid trials.
2. Characterization of the wood properties (cellulose/ lignin content and fibre characteristics) of Eucalyptus hybrids.
3. Establishing the VMG and mass multiplication.
4. Establishing multi location hybrid clonal trial and evaluation

Summary:

As per the objectives of the project, the interspecific hybrid evaluation has been done the trial established at Sathyavedu, Andhra Pradesh (130 19 ;36.28N; 790 43 ; 37.17E). Based the initial growth the hybrids which are performing at par and better than the ruling Clone of ITC- 7 has been short listed accordingly the hybrids of following crosses EC111X Et 86, EC7XEt88, EC17X EG9 and EC17X EG14. Accordingly 36 Eucalyptus hybrids have been short listed based on the productivity. Subsequently all 36 hybrids coppice shoots were collected and assembled in the VMG at IFGTB. All were clonally mass multiplied and established the clonal Hybrid clonal trial in different agroclimatic zones of Tamilnadu and A.P. The three trials have are in Neyveli Field Research station TN,(11 32 0 N79 29 0 E) Thuvankurichi Field Research station TN(10 37 ;88 N78 38 ;77 E) and Nellore, AP (14 44 ;26 N79 98 ;65 E) in the year 2014. In Neyveli trial the 36 month growth performance of eucalyptus height, there are about 6 clones (Clone No – 2, 3,13, 14, 15& 17) showed significantly higher than the grand mean height of 8.07m and Girth is concerned four clones (Clone No- 3, 6, 14 & 17) performed significantly higher than the grand mean of 20.80 cm. In Nellore trial the 36 month growth performance of eucalyptus height, There are about 7 clones (Clone No – &.10.13, 14,17, 28 &38) showed significantly higher than the grand mean height of 6.76m and girth is concern in 36 months performance there are about seven clones (Clone No- 6,7,11, 14, 15,28& 38) performed significantly higher than the grand mean of 15.25 cm. In Thuvankurichi trial 36 month growth performance of eucalyptus height, There are 10 clones (Clone No – 1,2,7,13,14,15,26,38& 40) showed significantly higher than the grand mean height of 6.42 m and girth is concern in 36 months

performance, there are four clones (Clone No- 11,14,34 & 38) performed significantly higher than the grand mean of 15.26cm. There are 18 clones performed much better than ITC -7 two clones performed much better (Clone -14 (0.90 m³) & clone -6(0.77 m³) than the IFGTB -4 (0.76 m³) released clone. The Wood traits analysis and other parameters analysis indicates that they are significantly valuable in the perspectives of paper & pulp industries : Cellulose content of clones 14 and 6 33,31.23; Lignin content 18.40,17.07; Fibre length 771.7,578.38; Fibre width 20.84, 20.96; Lumen diameter 12.20,11.02; Lumen wall thickness 4.32, 4.97, Cell wall thickness 8.64, 9.94; Sturdiness ratio of clones 14 and 6 (37.04), Rigidity co- efficiency 0.41, Flexibility co efficient 0.59, 0.53, Rankle ratio 0.71,0.90.

