

Indian Council of Forestry Research & Education
(An Autonomous Body of the Ministry of Environment & Forests, Govt. of India)

ABSTRACT OF COMPLETED RESEARCH PROJECT

Institute: Forest Research Center, (Institute of Wood Science and technology, Bangalore) Hyderabad.

Division: N.A.

1. **Project title and Code:** Estimation of Variability in *Pterocarpus marsupium* and germplasm collection Forest Research Center/X03

i). **Principal Investigator:** Dr. G.R.S. Reddy Scientist –E

a. ii). **Co-PI:** Nil

2. **Duration of the Project:** From November 2003 to March 2008

3. **Location:** Forest Research Center, Hyderabad

4. **Objectives:**

- i. Screen (Survey, identification and selection of) natural populations of red sanders for qualitative and quantitative parameters
- ii. Collect the germplasm (seeds and cuttings) ,
- iii. Raise individuals/ families for creating breeding populations

Major findings: A total of sixty populations were surveyed, identified, and studied based on provenance delimitation criteria for the parameters such as on stem form, height and GBH, selected some of the populations that are known to be better than the others for these parameters. The populations were found in districts of Adialabad, Khammamm, Warangal, Karimnagar, Bhadrachalam, where Indanpally of Jannaram, Mamandur Thirupathi Division of A.P. Though, the Karnataka state has several areas in Dandeli, Haliyal and Yellapur Divisions. Thirty Localities were identified for their phenotypic superiority and collected their germplasm and provenance delimitation criteria. The localities that were found to be superior based on GBH,

clear bole and height are: : 5). Jannaram, Indanpally, Kaval, 60). Kannegeri, Yellapur 59). Bhagwathy, Haliyal -6 km, 15. Rayachoti, Saanipaya Peddabidiki 38. Talakona Central beat, Jalpally, preservation plot, Rangampeta range, 8). Rayachoti, Saanipaya, Devara Devendlapally, 12). Rayachoti, Saanipaya, Devara Devendlapally, Machreddugaripally, 42). Kodilingambhavi, Ppreservation plot, Rajampeta Division 56. Rajukunta, Koduru, Cuddappah Dist. 2). GBM Range, Peddacheruvu, Srisailam, Kurnool Dist. 34. Vempally, Compartment 80, Kagaznagar, Adilabad Dist. 17. Thimnayanapalli, Thirupathi Division 11. Kaomba, Sirpur, Kagaznagar, Adilabad. 29). Talakona East, Rangampeta range. A number of plus trees were marked in various parts of the AP. Propagated 390 plants from different collections and maintained them well from 30 Localities from 60 candidate trees through seed. The progenies were raised in 2x2 m spacing. The vegetative propagation technique was not found to be successful [it is an established hard to root species]. The number of trials across different seasons and different concentrations of hormones proved futile with no plantlets reaching field stage. Grafting was found to be successful though not easy.

7. Shortfalls, if any : Nil
8. Funding agency (ICFRE/Name of external agency) : ICFRE
9. Amount sanctioned : Rs. 0.50 Lakhs
10. Expenditure incurred : Rs. 0.50 Lakhs
11. Publications : Nil
12. Patent No., if any : Nil
14. Technology developed for user groups :

The Plus trees and their populations were studied and based on quantitative parameters and statistical analysis selected certain populations with 10 individuals per population and 30 Localities. Three hundred and ninety plants were raised from 60 trees from these best 30 localities have been multiplied, raised in single site to evaluate their relative performance.

These superior progenies can be multiplied and extended to farmers and SFD's.

They are found to be the progenies raised from the collections of localities as mentioned below:

15. Whether technology is transferred to any user group : No

a. If yes

- i. Name of the technology :**
- ii. Year of transfer :**
- iii. Method of transfer :**
- iv. User groups and their response, if any :**
- v. Amount received :**

b. If no, reasons for not transferring the technology:

Four interactive seminars were conducted on tree improvement and breeding aspects to higher officials in State Forest Department. So far this species is only planted by the State. However, recently farmers are evincing interest in the species. The superior germplasm needs to be multiplied and distributed for its adoption and cultivation.

15. Any other information : Nil

16. Reference of Completion Report (For ICFRE only) :
