

PROJECT PROFILE

Title : Evaluation of selected phenotypes of *Casuarina* for establishment of windbreaks in farmlands in the western zone of Tamil Nadu

Principle Investigator : Dr. C. Buvaneswaran, Scientist-E

Project Associates : 1. Dr. A. Nicodemus, Scientist-E, Co-PI
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Start and Completion dates : Date of start: July 2010 and Date of Completion: March 2013

Objectives:

- To evaluate performance of selected phenotypes of *Casuarina junghuhniana* and *Casuarina equisetifolia* as windbreaks.
- To develop *Casuarina* based windbreak agroforestry system for crop protection and enhanced productivity.

Funding Agency : ICFRE

SUMMARY

The project primarily aimed to demonstrate how selected phenotypes of casuarinas tested at IFGTB can be used to design windbreaks in farmlands in wind prone areas of Coimbatore district. As envisaged, 25 phenotypes were selected and the selected phenotypes have been assembled in germplasm bank at IFGTB. On the basis of rooting ability of clones and within clone variation in initial growth traits, ten clones were selected and multiplied for field trials. These field trials were established in four locations and evaluated the selected phenotypes for their efficacy in minimizing wind speed. Finally, five superior clones have successfully been developed under this project for deploying in windbreak agroforestry systems, particularly for protecting banana crops from wind damage. Further, an economically viable *Casuarina*-Banana based windbreak agroforestry model has also been developed under this project. Based on the results, a brochure on 'Development of windbreak agroforestry systems – windbreak with casuarina and plantain' has been released both in

English and Tamil for the benefit of farming community. This publication will meet the need of the banana growers in this region to minimize the crop damages due to wind. Variety Release Committee (VRC) of ICFRE have approved and recommended five superior clones of *Casuarina junghuhniana* for commercial release as varieties for windbreaks.