

PROJECT PROFILE

Title of the Project	:	Screening for Blister bark disease resistance in <i>Casuarina equisetifolia</i> clones
Principle Investigator	:	Dr. A. Karthikeyan
Co Investigators	:	Dr. R. Anandalakshmi
Duration of Project (Start & End)	:	5 years 1.4. 2019 - 2014
Objectives	:	<ol style="list-style-type: none"> 1. Identification of resistant clones <i>Casuarina equisetifolia</i> against blister bark disease 2. Assessment of blister bark disease resistant clones of <i>C. equisetifolia</i>
Funding agency	:	NFRP
Summary/Achievements	:	<p>This project has been taken up to identify the blister bark disease resistant clones of <i>Casuarina equisetifolia</i>. Blister bark disease is the severe disease found in young plantations of <i>C. equisetifolia</i> caused by the fungal pathogen <i>Subramanionopora vesiculosa</i> (= <i>Trichosporium vesiculosum</i>). Identifying the resistant clones against blister bark disease is the long term management strategy hence under this project 250 clones of <i>C. equisetifolia</i> have been examined. (15 replicates each). 3 isolates (Panampally, Tuticorin and Rameswaram) of <i>T. vesiculosum</i> were analysed for molecular characteristics and found same genotypic character in three isolates. The clones were vegetatively propagated and inoculated with the pathogen <i>T. vesiculosum</i>. The inoculated clones were screened for disease resistance through disease severity score under nursery conditions. Totally 36 clones are showing resistant and 55 clones showed moderately resistant. Rest of the other clones showed moderate symptoms. Analysis of total phenols for all the 250 clones was performed. TNIPT -7, 11 TNRM 2, TNVM 2, TNIPT 1, TNIPT 7, TNIPT11, TNIPT20, 8 TNVM 2 and TNVM 2, TNIPT 1, TNIPT 11, CE 100, TNIPT 20, TNIPT 21, Py 170, Py 157, CE 93, Py 131, APSKLM, 26, APSKLM 30, CE 79 APSKLM 33, APVJM 33, APVJM, 31, APVJM 31 showed higher content of</p>

	<p>total phenols. The resistant clones have been planted at Panampally and Pondicherry in RBD to test the resistance against blister bark disease under field conditions. The clones TNIPT -7, 11, TNRM -8, Py157, Py 170, CE 100, CE79 and CE71 showed no symptoms in field conditions even at the age of 8 months. The resistant clones showed higher phenol content that influenced the disease resistance against blister bark disease. The clones TNPP -4.13 ,TNIP 12 -10, TMIPT -5-15, TNBS -1, TNIPT 12 were showed severe infection. Rest of the other clones showed moderate symptoms.</p>
--	---