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Genetic variation of *Casuarina equisetifolia* subsp *equisetifolia* and *C. equisetifolia* subsp *incana* populations on the northern coast of Senegal

A.L. Ndoye[1], O. Sadio[2] and D. Diouf[1]

[1]Département de Biologie Végétale, Laboratoire de Biotechnologies Végétales, Faculté des Sciences et Techniques, Université Cheikh Anta Diop, Dakar-Fann, Dakar, Sénégal
[2]UMR 195 LEMAR, IRD, Centre de Bel Air, Dakar, Sénégal

Corresponding author: D. Diouf
E-mail: diaga.diouf@ucad.edu.sn

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ABSTRACT. The genetic variation of 70 individual samples of *Casuarina equisetifolia* (L. Johnson) subsp *equisetifolia* and *C. equisetifolia* subsp *incana* growing along the northern coast of Senegal was analyzed with RAPD markers. Of the 160 primers tested, five were chosen; they generated 1396 reproducible bands and 61 polymorphic bands that were scored. This result showed a narrow genetic variation among (4.36%) and within (5.90%) *C. equisetifolia* subsp *equisetifolia* and *C. equisetifolia* subsp *incana* plantation sites. The genetic variation at each site revealed a high degree of polymorphism in Potou (5.90%) and low diversity in Retba (3.06%). In the dendrogram analyses, each sampling site was formed by two main groups. Similar results were found for the dendrograms based on the RAPD data gathered from the five different sites. These dendrograms revealed several polytomies in one of the subgroups, suggesting replication of the same specimens in different sites along the Senegalese coast. The RAPD data support the hypothesis that these populations are of the same provenance, subject to

hybridization and inbreeding depression.

Key words: *Casuarina equisetifolia* subsp *equisetifolia*; RAPD; *C. equisetifolia* subsp *incana*; Genetic diversity; Molecular marker; Northern coast of Senegal

