Czech Journal of GENETICS AND PLANT BREEDING

Table of Contents

Home

Editorial Board

For Authors

- Authors Declaration
- Instruction to Authors
- Guide for Authors
- Copyright Statement
- Submission

For Reviewers

- Guide for Reviewers
- Reviewers Login

Subscription

Czech J. Genet. Plant Breed.

S.K., Aparajita S.:

Study of relationships among twelve Phyllanthus species with the use of molecular markers

Czech J. Genet. Plant Breed., 46 (2010): 135-141

The present investigation was undertaken to describe the relationships among twelve species of *Phyllanthus* collected in India by help of molecular markers. In total, 259 marker loci were assessed, out of which 249 were polymorphic revealing 96.13% polymorphism. Nei's similarity index varied from 0.35 to 0.76 for RAPD (Random Amplified Polymorphic DNA) and from 0.31 to 0.76 for ISSR marker systems. Cluster analysis by the unweighted pair group method (UPGMA) of Dice coefficient of similarity generated dendrogram with more or less similar topology for both the analyses that offered a better explanation for diversity and

affinities between the species. The phylogenetic tree obtained from both RAPD and ISSR (Inter Simple Sequence Repeat) markers has divided the 12 species into two groups: group I consisting of only one species *Phyllanthus angustifolius* (Sw.) Sw and group II with the rest of 11 species. Basically, these results were in compliance with notable morphological characterization. The present study revealed high variation among the species of *Phyllanthus* and will help to identify different *Phyllanthus* species.

Keywords:

genetic variation; ISSR; medicinal plant; RAPD

[fulltext]