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Variability in Stone Characters and Early Progeny Performance of Selected *Melia dubia* Genotypes from Northern Western Ghats of India

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***Abstract*:** Variability in stone characters and early offspring performance at nursery stage was evaluated in twenty Candidate Plus Trees (CPTs) of *Melia dubia* selected from Northern Western Ghats of India. Aged drupes were gathered during February-March, 2014-15 and sown in nursery to contemplate the degree of inconstancy. Analysis of variance uncovered significant variations among the genotypes. CPTs namely NAU-9, NAU-12 and NAU-17 recorded predominance in stone morpho-metric characters, germination efficiency and early progeny performance markers under examination. Genetic variability analysis exhibited higher phenotypic coefficient of variation (PCV) with little variation to genotypic coefficient of variation (GCV) for all the characters under scrutiny whereas heritability (broad sense) ranged from 40.46 to 98.04% and genetic advancement per cent (GA%) from 6.98 to 85.81. Germination capacity of stones and seedling dry weight were the two strong heritable characters of interest which showed the higher PCV, GCV, heritability and GA% while stone length recorded lower esteems. Strong correlation among stone weight, germination capacity and seedling vigour and quality were established in this study. In addition to, twenty genotypes organized themselves in to four clusters based on similarity in characters as revealed by cluster analysis. In our examination, group III, accommodating offspring of NAU-9, NAU-12 and NAU-17 were predominant in mean stone and progeny performance characteristics. This investigation recommended the consideration of these principal genotypes for mass augmentation of quality planting material for improved farm productivity and further genetic advancement.

***Keywords*:** *Melia dubia,* Malabar neem, Variability, Stone, Progeny performance