



Molecular Diversity Analysis based on Microsatellite Markers in Pearlmillet Hybrids [*Pennisetum glaucum* (L.) R. Br.] and their Parental Lines

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Abstract: To assess the genetic diversity among three pearlmillet hybrids and their parents, 55 microsatellite markers were used in the present study. Out of 55 markers, 37 amplified producing 162 alleles. The number of amplified alleles among the genotypes ranged from 1-9 per locus with a mean value of 4.38 alleles per locus. The highest PIC value obtained was for PSMP 2263 (0.837) with a range of 0 to 0.837 with an average PIC of 0.598. UPGMA cluster analysis differentiated all the genotypes in 2 clusters containing all the three hybrids. One A-line namely ICMA 94555 and both the R-lines (HBL 11 and H77/833-2-202) remained ungrouped. The results have revealed presence of considerable amount of genetic diversity among the pearlmillet genotypes and indicated the ability of SSR markers in recognizing the molecular diversity.

Keywords: Pearlmillet hybrids, A-lines, R- lines, SSRs, Genetic diversity
