

RESEARCH PAPER

# Genetic purity and diversity in isoenzyme *Peroxidase* of pearl millet hybrids [*Pennisetum glaucum* (L.) Br. R.]

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The prospective of Peroxidase Isozyme biochemical marker, have been investigation in the present study, ten pearl millet hybrids [*Pennisetum glaucum* (L.) R. Br.] Genotypes were used to examine the suitability of peroxidase enzymes for characterization of pearl millet genotypes. Band number 1 ( $R_m = 0.120$ ) was present in three hybrids *i.e.* GHB-526, GHB-538 and GHB-719. Band number 2 (0.158) was also present in three hybrids *i.e.* GHB-538, GHB-577 and GHB-719. Band number 3 ( $R_m = 0.380$ ) was present in only one hybrid *i.e.* GHB-719 while band number 4 ( $R_m = 0.429$ ) was present in five hybrids GHB-538, GHB-719, GHB-732, GHB-235 and GHB-757. All the seven bands were present in only one hybrid GHB-719. 9 DAG stage was found to be more effective as compared to 3 DAG and 6 DAG by showing more number of bands. Among the 10 genotypes studied, two could be differentiated from each other Total 13 bands of peroxidase isozymes were observed at 3, 6 and 9 day after germination (DAG). A total of 15 alleles were generated by isozymes at different DAG (3, 6 and 9 days) with an average of 5 bands per day. Banding pattern at 6 DAG showed that band number 1, 2 and 3 ( $R_m = 0.525, 0.573$  and  $0.600$ ) were present in all the hybrids except for GHB-744, in band number 1. At 9 DAG seven bands of peroxidase isozymes were observed having  $R_m$  value of 0.120, 0.158, 0.380, 0.429, 0.430, 0.478, and 0.760.

**Key words** : Genetic purity, Pearl millet hybrids, ADH, GOT

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