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## Genetic analysis of yield and its components in Little Millet (*Panicum sumatrense* Roth ex Roem. and Schultz)

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Little Millet (*Panicum sumatrense* Roth ex Roem. and Schultz) is the staple food for millions in many parts of the world especially among tribals. The study was conducted in five experiments during 2008 - 2011. In experiment I, 105 germplasm accessions including check were evaluated and observations were recorded on 17 quantitative and 12 qualitative characters. Among the germplasm accessions, 12 accessions were selected as parents and crossed in diallel design including reciprocals in experiment II. The resultant 132 cross combinations along with parents and check were evaluated for 11 characters with a view of obtaining information on gene action in experiment III. Non additive gene action was predominant for all the characters except in case of plant height for which both additive and non additive gene actions play equal role. In experiment IV, variability and association of seven yield and its components were studied in  $F_2$  populations. High coefficients of variation were observed for grain yield per plant and number of basal tillers per plant. Heritability estimates were high for all the characters except flag leaf sheath length. Inheritance of qualitative characters indicated monogenic simple dominance inheritance for most of the traits except for grain colour and in crosses of purple x medium purple parents. Stability analysis was carried out for 12 parents over four environments for eight characters. Many of the stability statistics identified IPmr 1046 and IPmr 889 as stable genotypes for grain yield per plant.

### Biography

K. Salini completed her Ph.D. in 2011 from TNAU and joined as Scientist (Plant Breeding) with ICAR during September 2011 and presently working as Scientist at CRIDA.

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