



GENETIC DIVERSITY IN BER (*ZIZIPHUS MAURITIANA* LAM.) VARIETIES FOR LAC PRODUCTION

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ABSTRACT

Farmers grow lac on land races of ber, often whose fruits are of no desirable taste. Fruit varieties of *ber* have potential to yield good lac and in case of failure of lac crop they will produce marketable fruit. Genetic diversity serves as a way to adopt fruit varieties of *ber* to changing environments for lac production. It will improve livelihood security of tribal farmers in lac growing area. Present experiment was carried out on fruit varieties of *ber* in experimental plot of Institute Research Farm of IINRG, Ranchi during 2011-12 and 2012-13. Fruit *ber* varieties had adequate genetic variation, high heritability (72.5-84.6%) coupled with high genetic advance as percent of mean (92.5-221%) for chlorophyll content index, reducing sugar, soluble protein and scrapedlac yield. Therefore, phenotypic selection for genetic improvement of these traits will be effective as these traits are under the control of additive gene action. *Ber* varieties were grouped in three distinct clusters on the basis of morphological, biochemical and physiological markers. Cluster I had 9 varieties, cluster II with 10 varieties (with five varieties of cluster I) and cluster III with 9 varieties (with six common varieties of Cluster II). Most of the high scrapedlac yielding varieties (*Seb X Gola F₁*, *Jogia*, *Kaithali*, *Banarasi Karka*) lie in cluster III. Rest of the four varieties including CAZRI *Gola* was not able to form any cluster in this analysis. Genetic manipulation in *ber* varieties can be done by making divergent crosses to develop potential varieties of *ber* for lac production.