

Composite interval mapping and stability analysis for bread making quality and yield traits in wheat (*Triticum aestivum* L.)

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Sedimentation volume and Grain protein content have remained as indirect parameters to measure bread making quality, while thousand grain weight and test weight as indicators of wheat marketability. Identification of genetic markers linked with these traits was attempted using an RIL population developed from a cross between two Indian wheat varieties “HI 977” and “HD2329”. The phenotypic data of these traits was collected from six environments including three different agro climatic zones for two consecutive years. The composite interval mapping revealed 68 QTL controlling sedimentation volume, grain protein content, thousand grain weight and test weight with a total of 9 QTL clusters on 7 chromosomes, of which, two clusters were on chromosomes 1B and 5D. Stability analysis was attempted using additive main effect and multiplicative interaction model was used to select stable RILs for various traits. It revealed significant contribution of genotype x environment variance due to all traits. These stable RILs were clustered based on alleles, flanking the QTLs controlling these traits and an attempt was made to observe a pattern of the QTLs.