

GENETIC ANALYSIS OF RECOMBINANT INBRED LINES FOR TOTAL GRAIN PROTEIN CONTENT AND GRAIN YEILD IN RICE (*Oryza sativa* L)

UDAY G, MANJAPPA, KESHAVA MURTHY & SHAILAJA HITTALMANI

Marker Assisted Selection Laboratory, Department of Genetics and Plant Breeding,
University of Agricultural Sciences, Bangalore, Karnataka, India

ABSTRACT

Grain protein content in rice is an important nutritional parameter and development of quality rice with enhanced nutrition is very essential for eradication of malnutrition in the developing world. Evaluation of genetic variability is the source for any crop improvement programme, the success of which depends on sufficient genetic variability among genotypes permitting in effective selection. Genetic variability for many of the quantitative traits is enormously available in rice and variability can also be created artificially by means of several breeding techniques. Rice recombinant inbred lines were developed for total grain protein content and other yield related traits. Recombinant inbred lines, being the derivatives of two genetically diverse parents, serve as good source of genetic diversity as well as permanent mapping population to study this complex quantitative trait controlling protein content in rice. Several transgressive segregants superior to the parents for total grain content and other yield related traits have been identified.

KEYWORDS: Variability, Total Grain Protein Content (TPG), Recombinant Inbred Line (RIL)