**CORRELATION AND PATH COEFFICIENT ANALYSIS IN RICE (*Oryza sativa* L.)**

**J.R. JERISH1, S. SARAVANAN2, R. GANGAI SELVI3 and R. NARAYANAN5**

1 Ph.D Scholar, Department of Genetics and Plant Breeding, VOC Agricultural College and Research Institute, Killikulam, Vallanadu,Thuthukudi- 628252, Tamil Nadu, India.

2 Associate Professor and Head, Rice Research Station, Ambasamudram, Tamil Nadu Agricultural University, Tirunelveli– 627401, Tamil Nadu, India.

3 Associate Professor, Department of Physical Sciences and Information Technology, Tamil Nadu Agricultural University, Coimbatore– 641003, Tamil Nadu, India.

4 Assistant Professor, Department of Genetics and Plant Breeding, Faculty of Agriculture, Annamalai University, Annamalai Nagar – 608002, Tamil Nadu, India.

**ABSTRACT**

Rice (*Oryza sativa* L.) is one of the major cereal food crops for more than fifty per cent of the world population. Grain yield in rice is a quantitatively inherited trait and involves interaction of several components. Selection of superior genotypes based on yield is difficult due to the multiple phenotypic interaction of plant in which the component characters are interdependent and are governed by a greater number of genes. The present study was undertaken to assess the correlation and path coefficient analysis that existed among thirty five rice genotypes with nine yield and its component traits. Genotypic correlation studies for morphological characters revealed that single plant yield showed positive and significant correlation with plant height (0.46), thousand grain weight (0.45), days to fifty per cent flowering (0.26) and panicle length (0.23). Studies on path coefficient analysis for quantitative traits using genotypic correlation revealed that the direct effects on single plant yield was exhibited by thousand grain weight (0.40) followed by grain breadth (0.39), panicle length (0.34), number of productive tillers (0.34), plant height (0.33), number of grains per panicle (0.27), grain length (0.01) and days to fifty per cent flowering (-0.09). Thus, traits thousand grain weight, days to fifty per cent flowering, grain breadth and panicle length should be given more importance for enhancing grain yield under rainfed rice ecosystem.

**Keywords:** Rice (*Oryza sativa* L.), Correlation, Path coefficient analysis.