Morphological Variation in Selected SriLankan Rice (*oryza sativa* l.) Accessions in Relation to the Vegetative Parameters

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ABSTRACT: *Morphological variation of 16 rice accessions representing both traditional and improved varieties was assessed using 12 vegetative traits as described in International Rice Research Institute descriptor for rice, in sand medium using a Complete Randomized Design. The single linkage clustering, morphological dendrogram, multivariate analysis of variance and the Principal Components Analysis were performed to assess the traits. According to the cluster analysis, accessions 2840 and 10617 were the most closely associated among the varieties. Based on the variations associated with morphologically important vegetative traits, all the rice accessions were classified into three major groups as two traditional and one new improved variety groups. Existence of such clusters was validated by the Wilks' lambda statistics. The first four principle components explained over 80% of the total variation associated with the varieties. Among them the first two principle component cumulatively explained 54.46% of the total variation. Rice accessions 8920 and 2835 representing Bg360 and Bg450, respectively showed the highest principle component 1scores. Traditional rice varieties showed the comparatively higher scores in both principle components 1 and 2 than newly improved varieties. This study indicated that measured vegetative agro-morphological traits were helpful for preliminary characterization of varieties and also they can be used as a broad-spectrum approach to assess morphological diversity among morphologically distinguishable rice accessions.*

Keywords:*morphological variation of rice, multivariate analysis, traditional varieties, new improved varieties.*

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