Analysis of Leaf Morphological and Anatomical Features of Selected Six Rice Varieties

M.F. Sahani[1], *A.N.M. Mubarak*[2]

[1,2]*Department of Biosystems Technology, Faculty of Technology, South Eastern university of Sri Lanka*

[1]sahanifathima7793@gmail.com, [2]anmmubarak@seu.ac.lk

Abstract

A pot experiment was conducted at faculty of Technology, South Eastern University of Sri Lanka in the net house from August to December, 2023. The aim of the research was the investigation of leaf morphological and anatomical characters of selected six rice varieties in the low country dry zone. The performance of BG 360, BG 310, BG 403, BG 379-2, and BW 367 were compared with control variety AT 362. The experiment was laid out with Complete Randomized Design (CRD) with five replications. The data were recorded in the vegetative phase, started from 3rd to 13th Week After Planting. The results revealed that showed considerable variations during the experiment. Among the leaf morphological parameters, the highest number of leaves was produced in BG-403 and BG 379-2 compared to the control variety, leaf length and leaf width were found from control variety AT 362 which was statistically similar with BG 379-2 and BW 367 rice variety, and the highest flag leaf length and width were recorded from BG 379-2 and BW 367 which was statistically similar with control variety. Meanwhile, the anatomical features of tested rice varieties, the highest number of major and minor veins per mm was observed from BG 360 and the highest number of stomata was observed from BG 379-2 compared with control variety. The results concluded that BG 379-2, BW 367, and BG 360 exhibit better leaf morpho-anatomical performance among the tested rice varieties for low country dry zone.

Keywords: Anatomical features, Morphological characters, Rice (Oryza sativa L.)