

Analysis of rice growth (*oryza sativa* L.) under hydroponic condition

ABSTRACT

A hydroponic system is seen as an alternative rice cultivation system that possibly be able to overcome common problems encountered in conventional and traditional paddy cultivation such as irrigation systems, limited cultivation area, control of nutrient inputs, control of pests, and loss of community interest particularly the new generation towards paddy cultivation. Therefore, a field experiment was conducted to examine the vegetative growth of two local rice varieties under hydroponic condition. The experiment was a split plot design or 2x2 factorial design, where the main plot is a nutrient solution concentration, NCS with two levels (i.e., 600-700 ppm and 800-900 ppm) and the subplot is a local rice variety consisting of TQR-8 Sri Aman and upland rice variety called as 'Tadong'. Each treatment was replicated in four plants or pots. A two-way analysis of variance (ANOVA) and independent-samples t-test were employed in the data analysis. The results revealed that the hydroponically grown rice has slightly greater tillering ability and plant height (at least for Tadong) than that of conventionally grown.