

ABSTRACT

Nurdin and Fauzan Zakaria. 2012. Growth and Yield of Rice Plant by the Applications of River Sand, Coconut and Banana Coir in Ustic Endoaquert

The research aimed to study effect the application of river sand (RS), coconut coir (CC), and banana coir (BC) on growth and yield of rice (*Oryza sativa* L.) in Ustic Endoaquert. The research was carried out in a green house using $3 \times 3 \times 3$ factorial design. The RS factor consists of three treatment levels which were 0% RS, 25% RS, and 50% RS. Meanwhile, the CC and BC consist of three treatment levels, where each level were 0 Mg ha⁻¹, 10 Mg ha⁻¹ and 20 Mg ha⁻¹. The results showed that RS, CC and BC applications did not have significant effect on plant height. On the other hand, all ameliorant applications had significantly increase leaf length and the highest percentage increasing was in BC (13.49%). The leaf numbers and tiller numbers had relatively similar pattern, except BC that had significantly increased leaf numbers by 77.69% and amount of tiller numbers by 49.45%. Furthermore, for yield components, RS, CC and BC applications had significant increased panicle numbers by 37.76%. It was only RS and BC that increased panicle length and the best increasing of 26.82% on RS. Meanwhile, the BC application only increased the rice grain numbers.

Keywords: Banana coir, coconut coir, rice plant, river sand, Vertisols