

ABSTRACT

Nurdin. 2012. Effect application of sea sand, coconut and banana coir on rice yield

The research was aimed to study effect application of sea sand (SS), coconut coir (CC) and banana coir (BC) on the growth and yield of rice (*Oryza sativa* L.) planted at Ustic Endoaquert soil. The pot experiment was carried out using a factorial design with 3 factors. The first factor was SS consisted of three levels i.e.: 0%, 25%, and 50%. The second and third factors were CC and BC, each consisted of three levels i.e.: 0, 10, and 20 Mg ha⁻¹. Application of SS and BC significantly increased leaf length where the highest increasing percentage was 16.47% which was achieved at 25% SS application. Their effect on leaf numbers and tiller numbers were relatively not similar pattern where leaf number only increased about 65.52% by BC application, while tiller numbers only increased about 10.77% by SS application. Furthermore, the application of CC and BC significantly increased panicle numbers to 29.53% and 29.05%, respectively compared to control. All ameliorants significantly increased panicle numbers, but the best was CC with the increasing up to 46.49% at 20 Mg ha⁻¹ CC compared to SS or BC application. However, only coconut coir significantly increased the rice grain numbers.

Keywords: Banana coir, coconut coir, rice plant, sea sand, vertisol