

## **Comparative analysis of soil infiltration under three types of land use**

### **ABSTRACT**

Infiltration capacity is an important variable for understanding and predicting a range of soil processes. A study was conducted to evaluate the infiltration rates on three different land use practices namely, forestland, grassland, and construction land. Soil Infiltration rate was measured using a mini disk infiltrometer. Soil physical properties were analyzed to relate to the infiltration capacity. Cumulative infiltration shows that forestland has the highest infiltration rate with 30.62 mms<sup>-1</sup>, followed by grassland 25.40 mms<sup>-1</sup>, and construction land, 16.13 mms<sup>-1</sup>. Results showed that differences in infiltration rate of these three land use types were significant ( $p < 0.05$ ), with the construction land being the lowest almost half of the forestland rate, and grassland having an almost similar rate value to forestland. The results suggested that soil particle distribution does not explain the variation of infiltration but vastly suggested that soil moisture content and organic matter content do affect the infiltration capacity in the different land use practices.