

## عنوان مقاله:

Design, Operation and Construction of a Large Rainfall Simulator for the Field Study on Acidic Barren Slope

## محل انتشار:

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## خلاصه مقاله:

The utilization of rainfall simulators has turned out to be more far reaching with the automated instrumentation and controlsystems. This paper portrays a rainfall simulator designed for analysis of erosion on steep (2.5H: 1V). A rainfall simulator designed to perform experiments in slope is introduced. The large scale of the apparatus allows the researcher to work in remote areas and on steep slopes. This simulator was designed to be effortlessly set up and kept up as well as able and additionally ready to create a variety of rainfall regimes. The nozzle performance tests and lateral spacing tests were performed at Research Center for Soft Soil (RECESS), which is another Research and Development (R and D) activity by Universiti Tun Hussein Onn Malaysia. This test system is the standard for research involving simulated rainfall. The rainfall simulator is a pressurized nozzle type simulator. It discharges uniform rainfall on a square plot 6 m wide by 6 m (19.685 ft) long. The fundamental parts of a sprinkler rainfall simulator are a nozzle, a structure in which installs the nozzle, and the connections with the water supply and the pumping system. The structure of the test system was manufactured created with four fixed hollow rectangular galvanised on which a header with 25 nozzles attached to it. The nozzles are spaced 1 m apart. Flow meters control the inflow of water from the storage tank, ensuring each nozzle has a similar release rate, regardless of the introduction of the test system. The tank that was utilized has the 200 gallons of water which is 757.08 Lit and the full with water in tank can run the artificial rainfall simulation roughly around 50 to 60 minutes. The support system is collapsible, easy to set up and maintain. The subsequent test system is conservative (under RM9,000 to build), made with industrially accessible parts, simple to set-up and maintain and highly accurate.

## کلمات کلیدی:

Rainfall Simulator; Large Scale; Nozzles; Barren Slope

## لینک ثابت مقاله در پایگاه سیویلیکا:

