

A B S T R A C T

The aim of this research is to find the amount of water needed in filling the soil crack for the purpose of low land.

The method employed in this research is based on observation of the different quantities of soil cracks, caused by the change of soil moisture content and continued with measuring the water volume for filling the soil cracks.

Observation of the different quantities of soil cracks as the result of the change of soil moisture content, was done by 'quadran' system which the activities in this research is characterized by field research and laboratory research. The total amount of water needed for filling the soil cracks in its field capacity, will be done by supplying water, through a master plan with the method of supplying soil moisture mentioned in the same connection between soil moisture and filling of the water volume in certain type of soil. The relationship between the soil moisture with the filling of water volume in the crack mentioned is obtained from the data as result from laboratory experiment. Conclusions from the result of this research are as follow :

1. The total amount of water needed for filling the crack of each soil type is as follows :
 - a. Clay soil with moisture content approximately 33,8 percent is $78 \pm 1,8 \text{ mm}$
 - b. Clay loam soil with moisture content approximately 33,55 percent is $60 \pm 1,6 \text{ mm}$
2. The total amount of water needed for filling the soil cracks is influenced by :
 - a. Soil crack quantity
 - b. Soil moisture content
 - c. Soil texture.