ABSTRACTS

The aim of the study to examine impact of organic matter (i.e. chopped straw, cattle manure, "blothong" and waste of tapioca powder production) on some hydrophysical properties of sandy soil.

Result of the study show that the applied organic matter could change some hydrophysical properties of soil. The capilary rise follows an exponential equation, $Y_{control} = 5.5476 \ln (X) + 29.808$, $R^2 = 0.9764$; $Y_{straw} = 5.241 \ln (X) + 26.731$, $R^2 = 0.9855$; $Y_{manure} = 5.0316 \ln (X) + 22.745$, $R^2 = 0.9923$, $Y_{blothong} = 4.306 \ln (X) + 22.745$, $R^2 = 0.9700$; $Y_{residu\ of\ tapioca\ powder\ prod.} = 3.6441 \ln (X) + 17.602$, $R^2 = 0.9067$, where Y is height of cappilary rise cm and X is the time (day $^{1/2}$).

The contact angle formed are $\alpha_{control} = 43.945°$, $\alpha_{straw} = 48.241°$, $\alpha_{blothong} = 53.56°$, $\alpha_{manure} = 54.83°$, $\alpha_{residu\ of\ tapioca\ powder\ prod.} = 68.348°$. The total energi potential of soil water are, $\Psi_{control} = - 0.0376$ atm, $\Psi_{chopped\ straw} = - 0.0357$ atm, $\Psi_{blothong} = - 0.0316$ atm, $\Psi_{manure} = - 0.0309$ atm, $\Psi_{waste\ of\ tapioca\ powder\ prod.} = - 0.01979$ atm..