THE MOVEMENT OF SOIL MOISTURE IN THE UNSATURATED ZONE, TAGGED BY TRITIATED WATER

J. E. Dharmasiri. K. G. Dharmawardena
and
S. S. Amarasekara.
Radioisotope Centre, University of Sri Lanka, Colombo Campus, Colombo 3.

The movement of soil moisture in the unsaturated zone of a shallow unconfined sandy aquifer has been studied using artificial tritium tagging method. Findings are summarised below;

(1) The movement of soil moisture down the soil profile is layered and apparently piston like.

(2) The field capacity seems to be a very significant criterion in determining the movement of soil moisture down the profile.

(3) The movement of tritiated water closely follows the moisture movement.

(4) The artificial tritium tagging method yields low values for recharge to shallow unconfined aquifers due to the fact that, the fluctuating water table either leaches the tracer peak giving rise to a false peak or dilutes the tracer down to undetectable level by normal analytical procedures.